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BACT/LAER (Best Available Control Technology/Least Allowable Emission Rate) Information System (BLIS) User's Manual

PEDCo-Environmental, Inc., Durham, NC

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The BACT/LAER clearinghouse is a collection of summaries of permits issued by State, local and EPA Regional Offices. The document is revised annually and the data submitted is submitted voluntarily by the above mentioned agencies.

The clearinghouse is available in both hard copy form and through the automated system. This document is a user's manual that explains the method to retrieve the data through the automated system.

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Air pollution process
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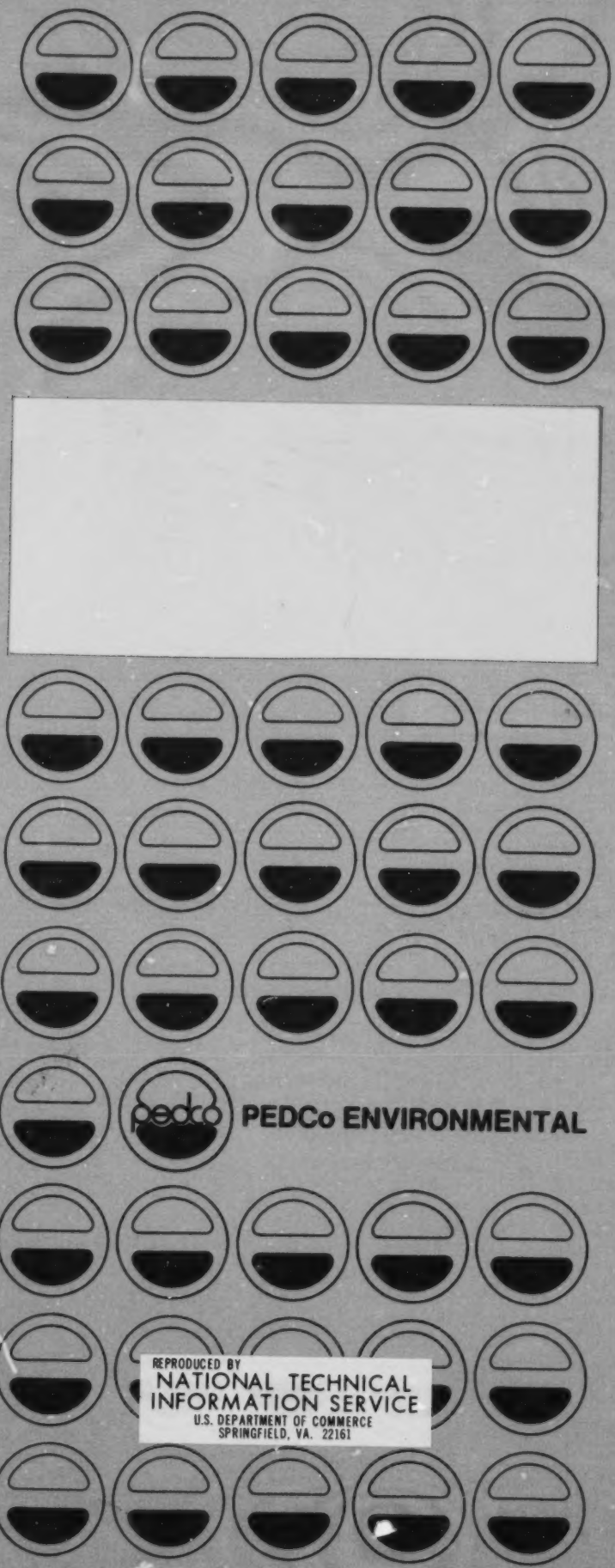

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BACT/LAER INFORMATION SYSTEM (BLIS) USER'S MANUAL

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SECTION 1

INTRODUCTION

The Clean Air Act of 1970 gave the U.S. Environmental Protection Agency (EPA) the responsibility and authority to control air pollution in the United States and its territories. One of the responsibilities given to EPA under Section 108 of the Act is to publish information on air pollution control techniques. This includes, among other things, data on available technology and alternate methods of prevention and control of air pollution.

Section 110 of the Act requires States to adopt and submit to EPA their State Implementation Plans (SIP's) for attaining and maintaining the National Ambient Air Quality Standards (NAAQS) in all regions of the State. Each State, therefore, must decide which existing emission sources should be controlled and to what extent. Quite often this existing source control represents Reasonably Available Control Technology (RACT).

Section 111 of Act gives EPA the authority to establish performance standards at a national level that apply to both new and modified sources. New Source Performance Standards (NSPS) must reflect the degree of emission reduction achievable through the application of the best system of continuous emission reduction (taking into consideration the cost of achieving such emission reduction, any nonair quality, health, and environmental impact; and energy requirements) that the EPA Administrator determines has been adequately demonstrated for a source category.

The Clean Air Act Amendments of 1977 also gave EPA some additional authority and required that certain control technology be imposed by the States in given situations. Section 165 requires that no major stationary sources may be constructed in an area subject to the Prevention of Significant Deterioration (PSD) requirements unless the source is subject to Best Available Control Technology (BACT) for each pollutant subject to regulation under the Act. Best Available Control Technology means an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the Act emitted from or resulting from any major sources that the permitting

authority on a case-by-case basis (taking into account energy, environmental, and economic impacts, and other costs) determines is achievable for such a facility. In no event shall BACT result in emissions of any pollutants that will exceed the emissions allowed by any applicable NSPS.

Section 172 states that each SIP for an area that does not currently attain NAAQS must require, among other things, permits for the construction and operation of new or modified stationary sources. One of the stipulations that must be met before permits to construct may be issued is that the proposed new source complies with the Lowest Achievable Emission Rate (LAER). The LAER for any source refers to the rate of emissions that reflects the most stringent emission limitation that is contained in any SIP for such class or category of source (unless the source demonstrates that such limitations are not achievable) or the most stringent emission limitation that is achieved by such class or category of source, whichever is more stringent. In no event shall the emission limitation be less stringent than that provided for under an applicable NSPS for that source or source category.

Although the specific criteria governing BACT, LAER, or NSPS vary, the general underlying approach is to require "best control" on all major new or modified sources. Because the complexity and workload of making new source review (NSR) decisions has increased over the past several years and more State and local programs are accepting the complete responsibility for issuing PSD and nonattainment permits, it is extremely important that information be provided to assist control agencies in making the necessary control technology determinations in a nationally consistent manner. The BACT/LAER Clearinghouse was established to assist State and local air pollution control agencies in making control technology determinations and in sharing control technology information.

The basic purposes of the BACT/LAER Clearinghouse are: 1) to provide State and local agencies with current control technology determinations, 2) to summarize recent determinations for sources of a similar size and nature, and 3) to provide data on the specific emission limits imposed on new or modified sources across the country. The information contained in the clearinghouse represents an abstract of control technology determinations made by EPA Regional Offices and State and local agencies. The information contained

in the clearinghouse is intended to be a reference or a starting point for State and local agencies when making BACT/LAER determinations.

Initially, the BACT/LAER clearinghouse was a manual system, and EPA Regional Offices and State and local agencies submitted summaries of their determinations to the Control Programs Development Division (CPDD). The CPDD then categorized the determinations by source type or category and compiled and duplicated the determinations for periodic transmittal to the State and local agencies.

Recently, meetings and discussions with several State and local agencies, EPA Regional Offices, and representatives of the Association of Local Air Pollution Control Officials (ALAPCO) and the State and Territorial Air Pollution Program Administrators (STAPPA) resulted in the development of an automated system to provide more rapid and upto-date information regarding BACT and LAER determinations. This automated system called for the creation of the BACT/LAER Information System (BLIS), a data base system that performs the following three functions:

1. Allows rapid updating of BACT/LAER determinations
2. Allows more rapid production of BACT/LAER Clearinghouse reports
3. Allows EPA Regional Offices (RO's) and State and local agency representatives to have more direct computer access to the data in the BACT/LAER Clearinghouse.

With these objectives in mind, a data base software system called System 2000 was put to use. A central EPA computer, the UNIVAC 1100, was chosen to house the BACT/LAER data base and to provide access to EPA RO's and State and local agencies. The System 2000 software program allows the various agencies to access BACT/LAER information from remote locations by the use of short, simple commands. Computer programming languages such as FORTRAN, COBOL, etc., are not necessary to access data from BLIS. The purpose of this manual is to explain how to access BLIS and how to write lists, tables, and reports with a minimum of effort. Users with more sophisticated BLIS needs are referred to other sources of information for advanced instructions that go beyond what is provided in this manual.

Section 2 describes the data stored in BLIS and the organization of these data. Section 3 instructs the user in how to gain access to BLIS. Section 4

lists the procedures for obtaining printed reports, and Section 5 instructs the user on data submission.

SECTION 2

INFORMATION IN BLIS

The primary output of the BACT/LAER Clearinghouse is a report of information that has been obtained from BACT/LAER determinations made by various control agencies. The report contains information on source size and type; the name and location of the company that applied for the construction permit; whether the determination was for BACT or LAER; pertinent source operating parameters such as capacity, pollutant emission rates, and control technology; and the name of a control agency person who can be contacted for further information.

2.1 ORGANIZATION OF BLIS DATA

Information in the BLIS data base is organized like a file drawer where dividers are used to group records under major and minor headings. System 2000 software permits this kind of grouping. The major heading is the industrial plant (source), and the major record under this heading contains information about the source, such as company name, address, and agency contact person.

The first minor record concerns the permitted process within the source. A process may be a unit such as a boiler, a heater, or a liquid storage tank. One source may have many process units and associated process records. A record for any one process contains information such as process description and throughput capacity.

The second minor record concerns the pollutant emitted from each process. This record contains information such as applicable emission limits and the kind of control equipment used to control the given pollutant. In System 2000 terminology the source record is Level 0, the process record is Level 1, and the pollutant record is Level 2 (Figure 1 shows the relationship between these levels). Because each record branches into subsidiary records, one record and its subsidiaries are said to comprise a "tree." The following sections describe the data items within each record (Levels 0, 1, and 2).

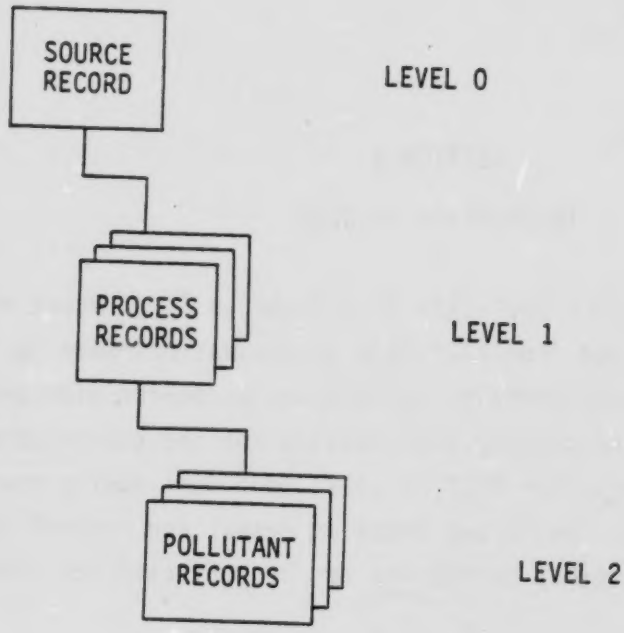


Figure 1. Relationship between BLIS Records.

2.2 LEVEL 0 DATA

Table 1 lists each data component name and number for each item of information stored in the BLIS data base. The first component at level 0 is "ID number." The notation "char X(7)" indicates that the component may consist of up to seven of any typewriter keyboard character A to Z, 1 to 9, or special characters (e.g., ?, !, or blank). By convention, ID numbers consist of a two-character initial for the State, followed by a dash, followed by a four-digit integer assigned by the BACT/LAER Clearinghouse. For example, ID number OH-0012 identifies the twelfth data entry (source record) received from the State of Ohio. Because each ID number is unique, it provides a short reference name for accessing a particular source record and its subsidiary records.

The next two data components or items are the Source Type Code and the Source Type Name, component numbers 2 and 3, respectively. Standardized source type codes were developed after studying the classes of industries currently being permitted. The source type code consists of a two-digit major classification code followed by a period, followed by a minor classification

TABLE 1. NUMBERS, NAMES, AND CHARACTERISTICS OF BLIS DATA COMPONENTS

Component number	Component description	Component characteristics or format
1*	ID number	Char X(7)
2*	Source type code	Char X(5)
3*	Source type name	Char X(50)
4*	Source size	Decimal number 9(10).99
5*	Source size units	Char X(20)
10*	Company name	Char X(50)
11*	Address	Char X(30)
12*	City	Char X(30)
13*	County	Char X(30)
14*	State initials	Char XX
15*	Zip code	Char X(5)
16*	EPA region	Char XX
17*	BACT/LAER determ.	Char XXXX
18*	New/modified	CHAR X(8)
19*	Date permit issued	Date[a]
20*	Permit number	Char X(30)
21*	Region file number	Char X(20)
22*	Estimated startup date	Date[a]
23*	Agency name	Char X(40)
24*	Agency contact person	Char X(30)
25*	Agency phone number	Char X(20)
26*	Notes	Char X(250)
27*	Notes continued	Char X(250)
28*	Code 1	Integer 99
29*	Code 2	Integer 99
100*	Permitted process	Record
101*	Process type code	Char X(5) in 100
102*	Name of process	Char X(50) in 100

(continued)

TABLE 1 (continued)

Component number	Component description	Component characteristics or format
103*	Throughput capacity	Decimal number 9(10).99 in 100
104*	Throughput units	Char X(20) in 100
200*	Pollutant	Record in 100
201*	Pollutant name	Char X(20) in 200
202*	Emission limit	Decimal number 9(8).9999 in 200
203*	Emission units	Char X(20) in 200
204*	Alternate limit	Decimal number 9(8).9999 in 200
205*	Alternate units	Char X(20) in 200
206*	Basis for limits	Char XXXX in 200
207*	Control equipment	Char X(50) in 200
208*	Process modification	Char X(50) in 200
209*	Percent efficiency	Decimal number 999.999 in 200

[a] __/__/__.

code. For example, source type code 6.52 contains major code "6" (indicating chemical process industry) and minor code "52" (indicating sulfur recovery). The source type names are standardized to facilitate coding. A full listing of standard source type names and codes is presented in Appendix A.

The next two components, numbers 4 and 5, are Source Size and Source Size Units. Source size is stored in the computer as a number permitting arithmetic operations such as sums and standard deviations to be carried out on these data. [The notation "9(10).99" indicates the maximum size number that can be stored: 10 digits before the decimal and 2 digits after the decimal. The smallest number possible is 0.01 and the largest is 9,999,999, 999.99.] Source size units may be T/YR (tons/yr) or some other measure of source size. Because it is often useful to compare information for sources of similar

size, standard abbreviations for source size units have been adopted for BLIS. Appendix B lists standard abbreviations for source size units. Note: Standard abbreviations are different from standardized units; therefore, the engineer submitting data to BLIS may use any units that he/she considers appropriate.

Component number 10 is Company Name. Although the maximum size company name is 50 characters, many company names in BLIS have been shortened by using common abbreviations known throughout the United States. For example, company may be shortened to Co., and corporation may be abbreviated to Corp; however, "ut." is not substituted for utilities because it is not widely used. Short names are desirable because printed tables often have limited space, which results in the truncation of long names.

The address of the source is composed of a number of individual data items. Address, component number 11, is primarily intended for street address, such as 1728 Prospect St; however, a post office box is sometimes used. If the source is an electric utility, the Address component is an appropriate place for the name of the generating plant, e.g., Big Island Generating Plant. Names of City and County (where applicable) are separate components, numbers 12 and 13. For consistency, city and county are spelled out in full. Component number 14, State Initials, is two characters in length and uses the standard State abbreviations developed by the U.S. Postal Service. Table 2 lists these two-letter abbreviations. Zip codes, component number 15, are only 5 digits long and do not include the proposed new zip code prefixes. Component number 16, EPA Region, is a two-digit character component that may have values "1" to "10."

Component number 17, BACT/LAER Determ., is the level of technology that best characterizes the determination for the entire source and its processes. This component may indicate "BACT," "LAER," or simply "blank" if no determination was made for the whole source. Component 18 indicates whether the determination is for a new or modified source. Component number 19, date permit issued, is described as a "Date." It is composed of three 2-digit integers indicating month, day, and year (e.g., 08/21/81). Permit Number, component 19, provides up to 30-characters to accommodate any permit numbering system used by a State or local agency. Region File Number, component number 20, is a number or code used by an EPA Regional Office to identify a particular source, and it may be used when the permit number is not available. Estimated

TABLE 2. TWO-LETTER STATE ABBREVIATIONS

Alabama	AL	Montana	MT
Alaska	AK	Nebraska	NE
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Canal Zone	CZ	New Mexico	NM
Colorado	CO	New York	NY
Connecticut	CT	North Carolina	NC
Delaware	DE	North Dakota	ND
District of Columbia	DC	Ohio	OH
Florida	FL	Oklahoma	OK
Georgia	GA	Oregon	OR
Gaum	GU	Pennsylvania	PA
Hawaii	HI	Puerto Rico	PR
Idaho	ID	Rhode Island	RI
Illinois	IL	South Carolina	SC
Indiana	IN	South Dakota	SD
Iowa	IA	Tennessee	TN
Kansas	KS	Texas	TX
Kentucky	KY	Utah	UT
Louisiana	LA	Vermont	VT
Maine	ME	Virginia	VA
Maryland	MD	Virgin Islands	VI
Massachusetts	MA	Washington	WA
Michigan	MI	West Virginia	WV
Minnesota	MN	Wisconsin	WI
Mississippi	MS	Wyoming	WY
Missouri	MO		

startup date, component number 21, is a date item and must have a number for month, day, and year.

Component number 23, Agency Name, identifies the agency that submitted the information to BLIS or the agency of the contact person. Components 24 and 25 are the Agency Contact Person and Telephone Number, important items to the BACT/LAER Clearinghouse. Telephone numbers are placed in a standard format, beginning with the area code, e.g., (999) 888-7777.

Component numbers 26 and 27 provide up to 250 characters each for notes. Notes provide additional information or clarify other data items. Two components are required for notes because the System 2000 software limits any one data item to 250 characters.

Component numbers 28 and 29, called code 1 and code 2, are integers that are used to allow BLIS data to be listed in numerical order of source code.

2.3 DATA AT LEVEL 1

As indicated in Table 1, there are four components in the first subsidiary record at Level 1. This record may be referenced by its name, Permitted Process, or its identification number, "100." As explained in a later section, all data in this record and all data in subsidiary records may be called out (and printed out) by naming the record identification number.

Component number 101, Process Type Code, has characteristics identical to those of the source type code. In fact, the source type codes listed in Appendix A are also used as process type codes. Both codes are needed, however, because the type of process permitted may be different from the type of source. For example, a vinyl chloride plant (source type code 6.59) may contain an oil-burning industrial boiler (process type code 1.2). Currently, process type codes only provide for external combustion processes such as boilers.

Component number 102, Name of Process, is the name of the process as given by the submitting agency; it has not been standardized. Throughput capacity, component number 103, and Throughput Units, component number 104, are analogous to components for source size and source size units. Throughput capacity refers to capacity of a particular process, whereas source size refers to the capacity of all processes combined. If a source were to contain only one process, source size and throughput capacity could be the same.

If a series of processes are identical and each one has the same throughput capacity, one record could cover all of them. For example, throughput capacity and units may be listed as "1.3 MM BTU/HR, 6 EA," which means six processes have the name indicated in component number 102, and each process has a throughput capacity of 1,300,000 British Tthermal Units (Btu) per hour.

2.4 DATA AT LEVEL 2

As indicated in Table 1, there are nine components in the second subsidiary record. This record may be identified by its name, Pollutant, or its identification number, "200." Under each process record there is one pollutant record for each pollutant that is emitted.

Component number 201, Pollutant name, may have up to 20 characters to spell out chemical names. Standard abbreviations are used for the most common

pollutants, e.g., CO, NOX, PM, SO2, and VOC. Note that HC (hydrocarbons) is replaced by the term VOC (volatile organic compounds) to indicate more specifically those hydrocarbons that are subject to regulation. Note also that numeral "2" in SO2 is a normal 2 rather than subscript 2 because most terminals and printers do not print subscripts.

Emission Limits, component number 202, and Emission Units, component number 203, are items of special interest in the BLIS data base. Because some agencies use multiple expressions of emission limits, the next two items are Alternate Limits and Alternate Units (i.e., alternate emission limits and alternate emission limit units), component numbers 204 and 205. The standard abbreviations listed in Appendix B also apply to emission units and alternate units. When several processes have the same emission limits, just one record 200 may be used. For example, an emission limit and emission unit may be "1.3 lb/MMBTU EA," which means that each individual process (named in data item 102) has an emission limit of 1.3 lb per million Btu for this pollutant (named in component 201).

Component number 206, Basis for Limits, uses the same terminology as item number 17, BACT/LAER determ. Although item number 17 is a determination for the source as a whole, the determinations for a particular process and a particular pollutant may be different. For example, a source might consist of five different industrial processes that, as a whole, are classified "BACT" for data item 17. One of the processes could, however, emit a pollutant that would be subject to the new source review nonattainment requirements. For this one pollutant, the emission limit would be classified as "LAER" in data item 206.

Component numbers 207 and 208, control equipment and process modification, respectively, are names of processes and equipment which make up the control technology for a particular process and a particular pollutant. Electrostatic precipitators (ESP's) and cyclones are examples of control equipment. The use of 2 percent sulfur fuel to control SO_2 is an example of a process modification. If names of equipment or processes exceed the 50 characters allowed for them, reference can be given to notes (component 26), where the equipment or process can be described in more detail.

The final component number 209, indicates Percent Efficiency of the specified control equipment or process modification for a particular pollutant on a particular process.

SECTION 3

GAINING ACCESS TO BLIS

Use of the BLIS data base involves the use of a computer terminal to connect to the UNIVAC computer at the EPA National Computer Center (NCC). Simple commands suffice to have the needed information printed on the terminal screen. Although performing this task is easy for an experienced user, the beginner must take a number of simple steps.

3.1 GETTING REGISTERED FOR THE UNIVAC 1100

Currently, the BLIS data base is available only on the UNIVAC 1100 computer located at NCC, Research Triangle Park, North Carolina. Each new user must obtain a user-ID and an account number to gain access to this computer. Users who already have these items and know how to use them at their own terminals may proceed immediately to Subsection 3.4. Note: Account numbers and passwords for other EPA computers will not work on UNIVAC.

Registration for the UNIVAC computer at NCC involves a certain amount of program planning and financial accounting. Information required by NCC is submitted on EPA Form 2800-3, EDP Services Registration, whether or not the new user is an EPA employee. A sample form can be found in Appendix C. If the new user is an EPA employee, the form must show the Department of Interior Personnel System (DIPS) organization title and code and the Zero Based Budget (ZBB) decision unit title and codes assigned by the EPA Office of Planning and Programming. The most efficient way to complete this procedure is to call NCC Account Registration at (919) 541-3629 or (FTS) 629-3629 and request their assistance in completing the form.

Once completed, the form is submitted through the user's Automatic Data Processing (ADP) Coordinator and sent to the Time Sharing Services Management System (TSSMS) Office, at the following address:

TSSMS Office
Environmental Protection Agency
National Computer Center
MD-34C
Research Triangle Park, North Carolina 27711

Non-EPA users must be in an organization that has established an Interagency Agreement with EPA. In this case, the form is submitted to:

Mr. Lloyd M. Hedgepeth
Environmental Protection Agency
National Computer Center
MD-18
Research Triangle Park, North Carolina 27711

When the request has been approved by TSSMS, the new user will be sent a personal letter containing his account number and user-ID.

3.2 SELECTING A TERMINAL

The UNIVAC 1100 computer at NCC may be accessed from anywhere in the United States by use of a telephone, a computer terminal, and a modem. Most computer terminals sold in the United States are compatible with the UNIVAC system, and many microcomputers have programs that allow them to be used as terminals. In addition, many word processors (e.g., IBM Display Writer, Lexitron, or Wang) may be used as terminals. If one of these types of terminals is available, it can be used to access the BLIS data base. The vendor can be contacted to find out whether a particular terminal requires any adaptations or modifications. If a new terminal is to be purchased, it would be wise to ensure that it does not have to be modified to communicate with the UNIVAC.

To determine whether a terminal is compatible with UNIVAC, the vendor will require certain technical data about the UNIVAC system, e.g., that UNIVAC communications are coded ASCII, are asynchronous, and use 8 bit words. One of these bits is a parity bit, and there are 7 bits per character. Parity is even, and there is one stop bit. Communications are in half-duplex, and a carriage return signal is sent to the terminal after each signal is transmitted. For additional data about UNIVAC, call Telecommunications at NCC, phone (919) 541-4506 or (FTS) 629-4506. A list of commonly used terminals and their codes are provided in Appendix D.

In addition to a terminal, a modem is required. This device receives messages over telephone lines from the computer and converts them into codes that a terminal uses to create words on the cathode ray tube (CRT). It also converts messages from the terminal into electrical patterns that are sent back to the computer over the telephone line. An acoustical modem receives messages as sounds through a standard telephone receiver. An electrical modem bypasses the telephone receiver and receives electrical impulses directly from the telephone line.

Different modems transmit messages back and forth at different speeds. UNIVAC will function only with modems that operate at either 300 or 1200 bits per second (bps), the commonly used speeds. A modem that uses any other rate of transmission will not work.

3.3 DIALING UP UNIVAC

The EPA uses a special telephone service to connect computers to users at terminals. This service consists of a telephone network supplied by a contractor, TYMNET. TYMNET serves computers and terminals at many government agencies and businesses located throughout the world.

To communicate with UNIVAC, the user must first connect into TYMNET. Each city has a local telephone number that allows a user to connect to a distant computer with no long distance fee. A list of available telephone numbers is provided in Appendix E. If no telephone number is listed for a particular town or city, call Telecommunications at NCC for an alternate (800) number to use.

At this point a user is ready to use his/her terminal. The first step is to make sure that all the switches on the terminal and the modem are correctly set for communications with UNIVAC as required before dialing the local TYMNET number. The first message from the network will request a terminal identifier (if the user operates at 300 bps, this first message may be garbled). For most terminals the user will enter the letter 'A' (from Appendix D). The network will then prompt the user for the computer desired, and he/she should enter "UNIEPA1; NCC." When the terminal is connected to the main computer, UNIVAC will request the user's user-ID and password.

When using a new account, the new user-ID and password are identical, usually a series of three or four characters similar to initials. When the UNIVAC is first entered, a new password is declared by entering the following:

USER-ID/OLD-PASSWORD/NEW-PASSWORD

The "new-password" will be any three- to eight-digit string of numbers or letters. At other times, the following should be entered.

USER-ID/PASSWORD

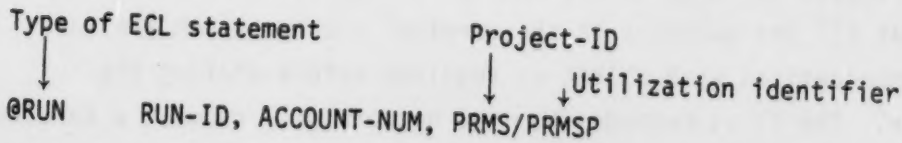
It should be noted that a user is responsible for changing his/her password at least every 90 days for reasons of security.

At this point, the user is connected to UNIVAC and is ready to issue his/her first command to the computer.

3.4 USING UNIVAC LANGUAGE

The UNIVAC 1100 uses a software program called the Executive ("EXEC"), which keeps track of the activities of several hundred users, bills them, and carries out their orders. When a user gains access to UNIVAC, he/she is automatically connected to the "EXEC." To use the BLIS data base, he/she must issue four commands in Executive Control Language (ECL).

The first command is a "run" statement that delivers the necessary accounting information to the EXEC. No further work can be conducted until the EXEC accepts this information. The following is a run statement to submit when using BLIS:



The master character "@" is placed in the first character position of every ECL statement, so that Exec recognizes that ECL is being used. The word "RUN" is the name of the statement. "Run-ID" is a series of up to six numbers and letters that provides a name for all the activities performed during a session at the terminal. By convention, the first two digits of

run-ID are numbers to identify a "bin" somewhere at NCC or at a remote location where printout (if any) from this run will be placed. The other numbers or letters usually identify the user. Account number refers to the authorized account number given to the user by TSSMS. The project-ID helps to identify files that will be used during the run. Utilization identifier is a more detailed classification of the type of computer activity, and should be the same for most BLIS users. Spaces, commas, and slashes must be entered exactly as shown.

If the user makes an error, the EXEC will issue a message stating the problem. The user should go back to the password entry, enter the password, and then enter the run statement again. Most terminals have a "control" key. If a user recognizes that a wrong character was entered, he/she may type "control" and "z" simultaneously, and the immediately preceding character will be ignored. If the user types "control" and "x" simultaneously, the whole line will be ignored and he/she can start over.

After each command is entered, the appearance of a line pointer ">" at the left margin indicates that the EXEC has executed one command and is ready for another. The second command is as follows:

```
@ASG,T     JP., F33, NCC054
```

The abbreviation "ASG" means that this is an assignment statement. It requests that a certain file, called "JP," be assigned to the run on a temporary (T) basis. The file is located on a magnetic disc named NCC054, which is read by a UNIVAC disc-reading device called F33. Magnetic discs can store large volumes of data; this particular disc contains the BLIS data base and numerous other data files. A pause after this command indicates that the disc pack is not currently mounted on the computer. An individual at NCC must go to the disc storage shelf, find disc NCC054, and mount it on device F33.

The third ECL command is as follows:

```
@XQT     S2K*S2K.S2K
```

The abbreviation "XQT" is a command to execute a program whose instructions are located in a computer file. The rest of the line is a file name. The ECL file name notation may be viewed as a tree. The trunk of the tree occurs before the "*" and is called the file qualifier (in this case it is

called "S2K."). The first main branch is the file name, which occurs after "*" and before ".". In this case the file name is "S2K," but it could have been "FILE1" or "JOE-BLOW." The smallest branch occurs after "." and is called the file element name. The name of this particular element is "S2K," but it could have been named "ELEMENT6" or "1234."

Programmers often choose qualifiers, files names, and element names that are acronymns to remind them of the purpose of the file. In this case the name S2K refers to the System 2000 software. After submitting this statement, the user will be connected to the S2K program and any further commands must use S2K language rather than ECL. These commands are described in the next subsection.

After the user is finished with the BLIS data base and is through using UNIVAC, a fourth command is issued in ECL. This command tells EXEC to tally up run time and costs because this is the end of the run. This command has the following syntax:

```
@FIN
```

These four commands are the minimum required for using BLIS. There are many more commands and options, which allow users to

1. Compile data files
2. Write new program in BASIC, COBOL, FORTRAN, PL1, and other languages
3. Use hundreds of existing programs, such as programs of the National Air Data Branch (NADB)
4. Use interactive programs, such as Statistical Analysis System (SAS)
5. Use tapes, discs, and core memory
6. Transfer data from EPA files to their own microcomputers
7. Transfer data from their terminals to the main computer.

The NCC User Reference Manual is a basic reference manual for all users. This manual provides valuable information about NCC, its procedures, available resources, computer operations, and software supported by NCC. It also instructs a new user on how to use the most important ECL statements. To

obtain a copy, fill out the form provided in Appendix F and send it to the addressee listed on the form.

3.5 USING SYSTEM 2000 (S2K) LANGUAGE

The syntax of commands in S2K is completely different from commands in ECL. For example, the user should not place a master character "@" in column 1. To do so will cause disconnection from the S2K program and connection to the EXEC. Every S2K statement, however, must end with a colon, ":". If a statement is entered and nothing happens, the colon may be missing. Extra blanks may be used between words, however, if the colon was omitted when a statement was submitted, the user may enter the colon on the next line and the command will still be executed.

The first S2K command is a password statement, as follows:

```
USER, ANY:
```

The name of the user, ANY, is also the password to allow entry into the S2K program. With this password a user may retrieve any data desired from BLIS and write tables, lists, and reports. ANY user, however, is not authorized to change data or add data to the data base. Changing the data base can introduce errors or even destroy a data file. Use of password ANY provides protection both for the data base and for the user. After each S2K statement, there will be a message, a printout of data, or simply a line pointer to indicate that one statement has been received and S2K is ready for another.

The next S2K statement is as follows:

```
SHARED DATA BASE NAME IS BLIS:
```

The S2K program will check to see if the password is authorized for the data base. If it is, all data files associated with BLIS will automatically be assigned to the user's run. The word "SHARED" means that the data files can be used simultaneously with other users. If this word were omitted, files might be assigned exclusively to one run and other users would be blocked. Exclusive assignment is necessary only when data files are being updated. If the message "data base not available" is received, the data files are either being updated or they are damaged. The user should sign off and try again later. If this condition persists, CPDD should be notified of the problem.

The next commands, which are optional, are designed by the user. One of the simplest statements is the PRINT command, which causes data to be printed out on the screen. Table 1 can be used as a handy menu of data items that may be PRINT'ed. For example, the command

PRINT COMPANY NAME:

would cause the names of all companies in the data base to be printed on the screen in a single column; however, because the data base currently has over 750 entries, the user would have to wait a long time for all of the company names to appear. Furthermore, most screens can show only 20 lines at one time. The 1st name would disappear from the top of the screen as the 21st name appeared on the bottom of the screen. This is not an effective way to use the data base.

A more effective way to use the data base would be to use a command to print only the data needed and only the amount of data that will fit on a screen. If a long list of data is needed, it should be printed on paper (see next section). An effective way to use the PRINT command is to modify it with a WHERE clause. For example, the following command

PRINT COMPANY NAME WHERE STATE INITIALS EQ OH:

will cause only companies in the State of Ohio to appear on the screen. In S2K syntax the verb PRINT comes first, followed by the object (company name), followed by a modifying (WHERE...) clause. Note that this statement is an understandable English sentence.

If there are still more lines of data than will comfortably fit on a particular screen, the command should be further modified. For example, each of the following statements should cause no more than 15 lines to be printed at one time:

PRINT COMPANY NAME WHERE STATE INITIALS EQ OH AND ID NUMBER LT OH-0016:

PRINT COMPANY NAME WHERE STATE INITIALS EQ OH AND ID NUMBER SPANS OH-0016*OH-0032:

Note that LT is an abbreviation for "less than." By using similar key words in the WHERE clause [AND, OR, LT, GT (greater than), EQ (equal to), LE (less than or equal to), GE (greater than or equal to), and SPANS], the

user can retrieve just the information he/she desires and can leave the rest of it in the data file.

Long commands can be cumbersome and error-prone. Commands may be shortened by using data numbers (listed on Table 1) rather than data names. When data numbers are used in a statement they must be preceded by the letter "C" (component). The word PRINT can be shortened to PR and WHERE can be WH. The following commands are equivalent to those just given:

```
PR C10 WH C14 EQ OH AND C1 LT OH-0016:
PR C10 WH C14 EQ OH AND C1 SPANS OH-0016*OH-0032:
```

Another shortcut is the use of SAME. For example, PR C24 WH SAME: means to print agency contact person names under the same WHERE conditions as the previous command. Small tables (called lists) can be printed on the user's screen by use of the command LIST. LIST is used when the user wants more than one data item printed, with each item in a different column. For example,

```
LIST C12, C14, C15 WH C14 EQ OH AND C17 EQ LAER:
```

will print a table of addresses (city, state, and zip code) where an overall determination of LAER was made for a company in Ohio. The syntax of S2K requires a comma after each component (data item) except the component just before the where clause, which must <u>not</u> have a comma. Any number of blanks may be used between words.

If a long list of data items is to be printed on the screen, the resulting table may not be legible. Most screens can accommodate 80 characters on a single line; if the listed data requires more than 80 characters "wraparound" occurs. Data items at the end of the line would be printed on the next line, so that different data items appear to be printed in the same column. If a microcomputer screen with a line width of 40 or 60 characters is being used, wraparound is an even greater problem.

To avoid wraparound, the user must know in advance how many columns (one character per column) are needed for each line. For each data item, the user should allow the greater of (a) the data length shown in Table 1, or (b) the length of the title including blanks. In addition, he/she should allow three spaces at the beginning of each line and three spaces after each data item. For example, in the last LIST command "city" requires 30 characters (data length), state initials requires 14 characters (title length), and zip code

requires 8 characters (title length). Total line length equals 30 + 14 + 8 + 3 + 3 + 3 + 3 = 64 characters. This table will fit on an 80 character screen with no wraparound.

A useful command to survey the whole data base is the verb TALLY. For example, if the user wants to know the number of entries in the data base as of today, he/she may enter

```
TALLY/ALL/C1:
```

which causes the number of ID-numbers (there is one per entry) to be summed, and the sum printed on the screen. The expression "/ALL/" is a modifier telling what kind of tally to do. The other type of tally is "/EACH/." For example,

```
TALLY/EACH/C3:
```

will cause a table to be printed showing names of the different source types that occur in the data base and the number of times each one occurs. At present, TALLY cannot be used with a WHERE clause.

Several other functions are built into the S2K program so that key information can be presented succintly. These functions are MIN (lowest value), MAX (highest value), SUM (total of all values), COUNT (number of values - like TALLY), AVG (arithmetic average), and SIGMA (standard deviation). For example, a user might want to know the lowest, highest, and average emission limits for a certain pollutant when control technology is LAER. He/she may enter the following:

```
PR MIN C202, MAX C202, AVG C202 WH
C201 EQ SO2 AND C203 EQ PPM:
```

Note that emission units (C203) are specified in the WHERE clause as well as the pollutant (C201). If mixed emission units were used, the minimum values would have little meaning.

The S2K commands presented in this section provide sufficient capability for users who need to summarize data at their terminal. Appendix G provides an annotated example of a terminal session using the commands described in this section. If more detailed tables or data summaries are needed, the user should proceed to Section 4.0 to learn how to obtain printed outputs.

SECTION 4

PRINTING OUTPUT

With a few commands and an understanding of the data base, a user can obtain the latest BLIS information at a computer terminal. This section describes how to obtain a printout from BLIS.

4.1 OBTAINING COPIES OF STANDARD TABLES

One type of printed report that may be obtained is a report entitled "A Compilation of Control Technology Determinations." This report, which is updated on a regular schedule, consists of standard tables that CPDD distributes to BLIS users. Table 1 of this report, called Index of Control Technology Determinations, lists company names, State, date permit issued, agency, name of contact, and telephone number for every BLIS entry, in order of source-type. Table 2, Control Technology Determinations by Type of Source, is an abbreviated summary of each determination. It lists company name, State, permit number or regional file number, source size, whether it's new or modified, a description of each process permitted, names of pollutants controlled, their emission limits, and the basis (BACT/LAER) for emission limits. Table 2A repeats the same information, but only for entries with industrial or utility boilers. The "Appendix - Detailed Source Listings" provides a complete listing of all data.

To obtain additional copies of this report, the user should call Mr. Gary Rust, telephone (919) 541-5516 or (FTS) 629-5516. In addition, there are copies of each table in electronic form in the UNIVAC computer; these are located in print files named PRMS*TABLE1., PRMS*TABLE2., PRMS*TABLE2A., and PRMS*APPENDIX.

To print tables from computer print files, the user may either use the high-speed printer at NCC or the printer at his/her own office. To use the printers at NCC, the user needs a bin number. This number is part of the RUNID given in a "@RUN" statement (Section 3). For example, Appendix H lists

standard bin numbers and addresses for each EPA regional office. If the user is not an EPA employee, he/she may obtain a bin assignment by calling NCC Data Processing Support at (919) 541-2385; NCC will automatically mail any printout identified by bin number to the address associated with that bin.

To use NCC printers, the user may begin a terminal session by dialing TYMNET and entering his/her terminal code, password, and UNIVAC "@RUN" statement, as described in Section 3. He/she should assign disc NCC054, because the print files are located on that disc. Then, instead of executing the S2K program, the user should enter the following ECL statement:

@SYM,U PRMS*TABLE1.,1, PR

This statement sends one copy of file PRMS*TABLE1. to the high-speed printer named "PR." Note that the master control symbol "@" must occur in column 1. The term "SYM" is an abbreviation for "symbiont," a statement that sends a print file to a printer. The comma and letter "U" indicates an option for SYM, which in this case saves the original copy of the file rather than deleting it. If other tables are desired, the user should issue an additional @SYM statement, substituting one of the other file names for TABLE1. If more than one copy is desired, the desired number should be substituted for number "1." The above statement creates output on standard lined 11 in. x 15 in. computer printout paper. If unlined paper is desired, PR1800 should be substituted for PR. If better print quality is desired, PR3800 should be substituted for PR. If printing on 8½ in. x 11 in. paper is desired, PR3801 should be substituted for PR.

A third method for users to obtain additional copies of standard tables is to print them at their terminals. This procedure requires a microprocessor or a "teletype" terminal with direct connections to a printer or to a disc drive so that data may be saved for later printing. Because standard tables are hundreds of pages in length, however, this procedure is <u>not recommended</u> because it is costly.

4.2 CREATING PRINTED TABLES

Creating tables from the BLIS data base requires rudimentary knowledge of computer comands from three software programs:

1. The UNIVAC editor (@ED program)---five commands

2. Executive Control Language---two additional commands

3. S2K "access" language---additional options available in the LIST command.

The steps required to create a printed table are as follows:

1. Initiate a session at the computer terminal. (Follow directions from Section 3, including the @RUN statement.)

2. Create a program file in UNIVAC.

3. Place into the program file (using the editor) a set of program instructions (ECL & S2K) that will create a table and print it.

4. Start the program.

5. End the terminal session.

6. See references for further assistance (Appendix K).

A program file in UNIVAC is given a name by using the following system:

QUALIFIER*FILE-NAME.ELEMENT-NAME/VERSION

To keep track of the needs of each user, the following naming convention should be used:

QUALIFIER = PRMS

FILE-NAME = USER

ELEMENT-NAME = (State postal service initials)

VERSION = (table title in 12 characters or less and no blanks)

To establish a program file, the user should enter the following:

@ED,I PRMS*USER.UT/TABLEA

Note: If the user is not from Utah, and the name of his/her table is not "Table A," he/she should make appropriate substitutions in the above program file name. The term "ED" is an abbreviation for UNIVAC Editor program, which is to be used when putting instructions into the file. Option "I" must be used for "initial" use of the file. If the file is to be changed or "updated" the "U" option must replace "I" in this command.

The editor operates in two modes, input and edit. In the input mode, the program will prompt the user to enter new data by printing the following:

I1:>

The letter "I" tells the user that the program is in input mode. Number "1" is the line number on which he/she is to enter data. The line pointer ">" means the program is ready for the data. If the user enters the characters MY NAME IS JOE, then @ED will print the following:

I2:>

The @ED program has entered input as line 1 of the file and is now ready for line 2 to be entered; however, the user might want to make a correction on line 1. (Perhaps the user's name is actually Josephine.) To make a correction, the user would first change to the "edit" mode of operation. To change from input mode to edit mode (or vice versa) the user enters a blank line (no characters). @ED will respond by printing the following:

1:>

This means that the editor is ready to edit line number 1.

To change one or more characters in a line requires the use of the change command (abbreviated "C"). "Delimiters" are used to mark off the characters the user wants changed and the characters he/she wants to create. For example,

C /JOE/JOSEPHINE/

will cause a different name to be entered in line 1. The editor will respond by printing the line the user has changed, and on the next line:

1:>

which means @ED is ready for another editing command. After the user has entered a number of lines of instructions (in input mode), he/she will find the following commands useful:

Command	Explanation
8	Entering a line number (e.g., 8) will cause @ED to "go to" that line. It will respond by printing "8:>", which means it is ready to edit line number 8.
D	Deletes the line that @ED is "at."

P 2 10 — Print (P) causes lines of data to be printed so they may be reviewed on the screen. The first number is the first line in the series of lines to be printed. The next number is the last line to be printed.

P! — Prints all lines currently in the file.

EXIT — Causes an exit from the editor program and makes a program file ready for use.

After the user has used the @ED program a few times, the following set of instructions should be entered into the program file:

```
@RUN,R      BBRUN-ID, ACCOUNT-NUM, PRMS/PRMSP
@SYM        PRINT$,1,PR
@ASG,T      JP.,F33,NCC054
@XQT        S2K*S2K.S2K
USER,ANY:
SHARED DATA BASE NAME IS BLIS:
LIST (with user-specified options):
EXIT:
@FIN
```

Note: The master control symbol "@" cannot be entered directly into the file in column one because it will cause an exit from the file and UNIVAC will attempt to execute the ECL statement. To get around this, the user should enter a substitute symbol such as "#" in column one and then switch to edit mode and change "#" to "@."

To complete this set of instructions, the user needs to know how to use the options available in the S2K "LIST" command. These options allow the user to specify a title for each page of the table, to place names at the head of each column, to specify the width of columns, and to list data in the columns in a desirable order. He/she may even specify a footnote to appear at the bottom of each page. The LIST command has the following general format:

```
LIST/(options,) TITLE (title specs,) (footing specs,) (column specs)/
    data list (, ordering clause) WHERE clause:
```

The statement always begins with the command LIST, always contains a list of data to be printed out, always ends with a colon, and should always have a where clause. Specifications in parentheses are optional; the command will work if they are missing.

Options that may be useful are DOUBLE SPACE & REPEAT OR REPEAT SUPPRESS (REPEAT is the default option). Each option that is used must be followed by a comma. The meaning of double space is obvious; REPEAT SUPPRESS means that data items on a higher level will not be repeated for every occurrence of a related data item at a lower level. For example, the user may want to print out the names of pollutants controlled (from level 2) for a certain process (from Level 1).

With REPEAT option the following is printed:

Process	Pollutant
Kiln	PM
Kiln	SO_2
Kiln	NO_x

With REPEAT SUPPRESS option the following is printed:

Process	Pollutant
Kiln	PM
	SO_2
	NO_x

The word TITLE must occur prior to any title specifications, footing specifications, or column specifications. If title or footing are left out, there will be none. If column specifications are left out, the names of data items printed in each column will be used as column headings (same as Section 3). A number in parentheses following TITLE indicates the number of characters (including blanks) that will occur on each line of the table. Default is 131.

Title specifications have the following format:

D(100)TITLE1 (+TITLE2) (+TITLE3),

The letter "D" indicates a title and date because the date of the report is automatically centered under the title. Number 100 (or some other number) specifies the column number for the first letter in the title. The title may

occur on 1, 2, or 3 lines. The portion of the title that occurs on each line is separated by "+" in the title specification. For example, title specification D(25)POLLUTANTS LISTED + BY PROCESS, would result in the following title, beginning in column 25:

```
POLLUTANTS LISTED
  BY PROCESS
  08/25/82
```

Footing specifications have the following format:

```
F(50)Footnote,
```

where F identifies a footing specification, 50 (or some other number) indicates the number of lines per page, and "footnote" indicates the message to be printed on the last line of each page.

Specifications for a single data column in the table have the following format:

```
L(10)Head1(+ Head2)(+ Head3),
```

One of these specifications should be provided for each data item in the data list and in the same order as the data list. The letter "L" indicates that both the heading and the data in the column are to be left-justified. The number 10 (or some other number) indicates the width of the column for both the heading and the data. It is the user's responsibility to provide sufficient space for the data. Otherwise character data will be truncated on the right and the character "*" will be printed in the last space of the column. Numeric data will be truncated on the left with no warning symbol. To get a right-justified column, the user should substitute R for L in the specification. Numeric data and dates will always be right-justified regardless of specs. Letter "B" instead of R or L means a blank column with no heading or data. It may be used as spacing between the other columns. Column headings may occur on more than one line, just like page titles.

A data list follows the second slash (/) in the statement. For example, C1, C10, C102, C201 could represent a list of data to be printed.

Data may be printed in ascending alphabetical or numeric order by using an ordering clause. The format is:

```
,ORDERED BY...data list
```

For example, ORDERED BY C102, C201 would cause data to be listed alphabetically by process name. Within each process name, pollutant name would be listed alphabetically, such as:

PROCESS	POLLUTANT
Process 1	CO
	NO_2
	PM
Process 2	CO
	PM
	VOC

The format and usage of WHERE clauses are discussed in Section 3.

Appendix I provides two examples of instructions and outputs for tables written by extended LIST commands.

Once the user has inserted the required ECL statements into his program file, including a carefully composed LIST statement, he/she may "exit" from the file and enter the following:

@START (Program file name)

The EXEC responds by printing a line on the screen showing that a new, independent run has started. EXEC uses the accounting information in the @RUN statement provided in the first line of the instructions, then it carries out every other line of instruction in the program file. Output is printed according to instructions on the @SYM statement and is routed to the bin number shown on the RUN-ID.

The LIST command with its options provides the user with an ability to write formatted tables with relatively little programming knowledge and with relatively short statements. For more advanced formatting, a different S2K language, called Report Writer, should be used. Report Writer specifications can be found in a manual published by INTEL, Inc. Some examples of Report Writer outputs are the standard tables distributed by CPDD. Detailed instructions for producing these tables are listed in Appendix H. More advanced users (computer programmers) with knowledge of FORTRAN or COBOL may also write programs from the BLIS data base. The Program Language Extension (PLEX) program of S2K allows access to S2K data bases from a FORTRAN or COBOL program. For further references, see Appendix K.

SECTION 5

SUBMITTING DATA TO BLIS

The performance of a BACT/LAER Clearinghouse depends on State and local cooperation and participation. Data may be submitted manually by filling out a standard form and sending it to the Clearinghouse, or data may be entered directly into the UNIVAC computer. Both methods will result in continued expansion of information.

5.1 SUBMITTING BACT/LAER DETERMINATION FORM

Figure 2 presents an example of a BACT/LAER Determination form overlaid with data names and numbers. A blank form is provided in Appendix L. Each number in Figure 2 is the data item number for the data sheets described in Section 2 of this manual. The first data item, ID-number, is not shown on the form because it is provided by the BACT/LAER Clearinghouse. The first data item to be provided by the State or local agency engineer is the source type code selected from the list of standard codes in Appendix A. Name is not necessary because the standard source code name is provided by the BACT/LAER Clearinghouse. Source size and size units should be provided when available.

On the second line of the form, the engineer should always provide company name, address, and State initials. City, county, and zip code should be provided wherever applicable.

The type of determination for the overall source may be indicated by circling BACT or LAER, New or Modified. Date of permit issuance is the date of the most recent permit that pertains to the determination.

The permit number follows the numbering system of the submitting agency. If it is EPA, a regional file number may be substituted. The startup date is an estimate. If only the year is given, January 1 will be used as a dummy variable to compose an S2K data item. If month and year are given, the 1st will become the dummy day for the data item.

Important data are agency name, contact person, and phone number (including area code). The first permit parameter to be provided is the name of

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Mail to: Gary Rust
RACT/LAER Clearinghouse
U.S. EPA (MD-15)
RTP, NC 27711

BACT/LAER DETERMINATION FORM

Book Section No.

Date of This Report

Source Type/Size: Source code (2) Source size (4) Units (5)

Company Name/Site location: Name (10) Street address (11) City (12) County (13) State initials (14) Zip (15)

Determination is: (17) BACT/LAER for New/Modified Source: (18) Date of Permit Issuance: (19)
(circle appropriate definition)

Permit No.: (20) or (21) Date of Estimated Start-up: (22)

Determination Made By: (23) (24) (25)
(100) (Agency) (200) (Person Directly Knowledgable About Permit) (Phone)

Permit Parameters: (list all processes subject to this permit)	Throughput capacity, weight rate, Btu input, etc.	Pollutant(s) emitted (SO, particulate, etc.)	BACT/LAER emission limit(s) and basis for the limits* (units of emissions/ units of input)	Control equipment or process modification description**	Eff. %
proc. name (102)	throughput (103)	poll. name (201)	emiss. limit (202)	equipment (207)	(209)
	& units (104)		and units (203)	& proc. (208)	
			alt. limit (204)		
			and units (205)		
			Basis (206)		

Notes***: (26) and (27)

*Indicate basis of emissions limit, i.e., BACT determined simply by technology and economics, NSPS, LAER, or determined by NAAQS or PSD increment constraints. (Example: 0.05 pounds particulate per million Btu input limit needed to protect Class I increment.)

**To the extent possible in the space available, describe basic control or process equipment design details. Indicate unique or innovative features.

***Notes are optional and can address special items, unusual circumstances, or other clarifying informa tion such as SIC codes.

Figure 2. BACT/LAER determination form.

the process. As an option, the user may select a process code from Appendix A. Note: Process codes frequently differ from source type codes. If a code for a combustion source (boiler) is left out, it will be supplied by the BACT/LAER Clearinghouse. When specifying throughput capacity, the engineer should use the standard abbreviations for capacity units listed in Appendix B.

For each process listed in the first column, the engineer should list one or more pollutants in the third column and provide an emission limit and emission limit unit for each (Appendix B). As an option, one alternate emission limit may be given. At the present time, one alternate limit is all that is defined in BLIS; additional limits cannot be input to the data base. For each pollutant, a brief name of control equipment and/or process modification is highly desired. Efficiency data may be provided when such data are available.

Space for notes is provided at the bottom of the form. Copies of the form may be used as continuation sheets for additional notes or processes.

The policy of the BACT/LAER Clearinghouse is to encourage and accept all entries, regardless of size and regardless of whether a BACT/LAER determination was actually made. (Some of the more innovative technologies may allow a company to escape official BACT/LAER determinations.)

5.2 COMPUTERIZED BACT/LAER DETERMINATION REPORT

If the submitting engineer is well versed in the use of the UNIVAC computer, he/she may find that entering data directly into the computer is almost as easy as completing a form. To submit a computerized BACT/LAER Determination Report, the engineer should know:

1. How to use rudimentary ECL
2. How to manipulate data with the UNIVAC editor.

First, UNIVAC must be entered to begin a terminal session (described in Section 3). To begin the first computerized report submittal, the engineer must catalogue a new computer file by entering the following:

```
@CAT,P PRMS*BLIS-SI.
```

This command establishes a new file that may be used by the submitting agency. Use of a filename convention is suggested to help the BACT/LAER

Clearinghouse keep track of data entries via computer. In the above statement, State initials should be substituted for "SI" in the filename (see Table 2). A new BACT/LAER determination is begun by entering:

@ED,I PRMS*BLIS-SI.06-03-83

where today's date is used for the new element name. This standard nomenclature facilitates finding data in the computer at a later time. The engineer should use @ED commands (Section 3) to insert data in the format shown in Table 3. A blank S2K form copied from Appendix L may be used to organize notes prior to entering data into the computer file. Previous comments concerning data items on the standard BACT/LAER report form also apply to data items in the computerized report form.

The format of the computerized BACT/LAER report consists of a data item number followed by an asterisk (*) which is followed by the data and a second asterisk. For example, 10*EWING OIL CO.* demonstrates the correct format for entering a company name. For readability, each data item may be entered on a separate line, as suggested in Table 3. The computer, however, will accept multiple data on a single line.

Data must be listed in a particular order. Data on level 0 (component numbers 1 to 31) are listed first (in any order). Then the term "100*" is used to indicate the beginning of data in a process record (components 101 to 104). This term may be placed on a separate line, as shown in Table 3, or it may be placed on the same line as the first data item in the record. The term "200*" precedes the beginning of data for a pollutant record (components 201 to 209). It may be placed on a separate line or simply precede the first data item in the pollutant record. All pollutant records must be listed before proceeding to the next process record. After all records and all data are listed for a particular source, the term "END*" is used to indicate the end of a BACT/LAER report for one source. More than one report may be listed in one computer file.

Data in Notes (Item 26) and Notes Continued (Item 27) require particular care. Regardless of screen size, the S2K program will only read data lines that are 80 characters (columns) long. If notes require more than 80 characters, writing should be discontinued after the 80th column, even if this causes a break in the middle of a word. It is good practice to avoid word

TABLE 3. HYPOTHETICAL EXAMPLE OF COMPUTERIZED BACT/LAER DETERMINATION REPORT

Data entry	Explanation
2* 5.5*	Source type code
4* 130.0*	Source size
5* MBPSD*	Source size units
10* Ewing Oil Co.*	Company name
11* 100 Dollar Blvd.*	Street address
12* Dallas*	City
13* Dallas*	County
14* TX*	State initials
16* 6*	EPA region
17* BACT*	B/L determination
18* M*	New/Modified
19* 12/08/83*	Date permit issued
21* PSD-TX-999	Region file no.
23* EPA Region VI*	Agency name
24* A.C. Current*	Agency contact person
25* (214)-767-9999*	Agency phone number
26* H25 LIMITED TO 0.1 GRAIN/SDCF.*	Notes
100*	First process record
101* Heaters, 12 EA.*	Process name
102* 144.0*	Throughput capacity
103* MMBTU/HEA*	Throughput units
200*	First pollutant record
201* NOX*	Pollutant name
202* 0.12*	Emission limit
203* LB/MMBTU*	Emission units
204* BACT*	Basis for limits
208* Low NOX burners*	Process modification
200*	Second pollutant record
201* SO2*	Pollutant name
202* 0.03*	Emission limit

(continued)

TABLE 3 (continued)

Data entry	Explanation
203* LB/MMBTU	Emission units
204* NSPS*	Basis for limits
208* Gas fired*	Process modification
100*	Second process record
101* Sulfur Recovery Unit*	Process name
102* 1000.0*	Throughput capacity
103* LT/D Sulfur*	Throughput units
200*	First pollutant record
201* SO2*	Pollutant name
202* 250.0*	Emission limit
203* PPM*	Emission units
204* NSPS*	Basis for limits
208* 3-stage claus unit*	Process modification
209* 99.9*	Efficiency
END*	End of data entry

breaks by adjusting spaces at the beginning of the line. For example, if a sentence contains a four-letter word beginning in column 79, place two blank spaces preceding the data item number of that line and begin the word on the following line.

The process of placing data into a UNIVAC file completes the computerized BACT/LAER Determination Form. The engineer should exit from the file and the runstream (@FIN), and then notify the BACT/LAER Clearinghouse of the data file that was created. These data are not a part of the BLIS data base until further actions are taken.

Once the BACT/LAER Clearinghouse has been notified of the creation of a data file, three actions will be taken.

1. The data file will be reviewed for completeness and ID numbers will be assigned. This is the same action as for manual data submissions.

2. A quality control program will be run to ensure correct format. (This does not ensure correct data--only the submitting engineer knows what is accurate.)

3. An S2K program will be run to insert the data into the data base.

These are routine procedures for all data submitted to the BACT/LAER Clearinghouse, both computerized and manual. The advantage of an engineer entering his/her own data into a computer file is that it reduces the opportunity for errors and speeds up the data entry process.

APPENDIX A

SOURCE TYPE NAMES AND CODES

SOURCE TYPE	CODE
1. External Combustion	
Coal combustion	1.0
Oil combustion	1.1
Natural gas combustion	1.2
Wood waste combustion	1.3
Multiple fuels	1.4
Other	1.5
2. Solid Waste Disposal	1.6
Refuse incineration	2.0
Sewage sludge incineration	2.1
Other	2.2
3. Internal Combustion	2.3
Natural gas turbines	3.0
Natural gas compressors	3.1
Other	3.2
4. Organic Evaporation Loss	3.3
Surface coating of cans and coils	4.0
Surface coating of paper and fabrics	4.1
Surface coating of automobiles and light-duty trucks	4.2
Surface coating of metal furniture	4.3
Surface coating of magnet wire	4.4
Surface coating of large appliances	4.5
Surface coating of miscellaneous metal parts and products	4.6
Surface coating of flatwood paneling	4.7
Solvent degreasing	4.8
Waste solvent reclamation	4.9
Graphic arts	4.11
Dry cleaning	4.12
Other	4.13
	4.14
5. Petroleum Refining, Oil and Gas Production, and Related Industries	
Petroleum refining - separation processes (distillation and light ends recovery)	5.0
Petroleum refining - conversion processes (cracking, reforming, alkylation, polymerization, isomerization, and coking)	5.1
Petroleum refining - treating processes (hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, and deasphalting)	5.2
	5.3

SOURCE TYPE	CODE
Petroleum refining - feedstock (storage, blending, loading, and unloading)	5.4
Petroleum refining - auxiliary (boilers, wastewater treatment, hydrogen production, sulfur recovery, cooling towers, blow-down system, compressor engines, heaters, and incinerators)	5.5
Petroleum refining -entire operation	5.6
Bulk terminals	5.7
Bulk plants	5.8
Storage of petroleum liquids	5.9
Transportation and marketing of petroleum products	5.11
Natural gas/gasoline processing plants	5.12
Asphalt and associated products manufacturing and processing	5.13
Crude petroleum and natural gas production including oil shale	5.14
Oil and gas field services	5.15
Other	5.16
6. Chemical Process Industry	
Acrylonitrile	6.0
Acetic acid	6.1
Acrylic acid	6.2
Acetic anhydride	6.3
Acrolein	6.4
Acetaldehyde	6.5
Adipic acid	6.6
Aniline	6.7
Alkylbenzene	6.8
Butadiene	6.9
Carbon black	6.11
Charcoal	6.12
Chloroalkali	6.13
Chlorobenzene	6.14
Chloromethane	6.15
Chloroprene	6.16
Caprolactam	6.17
Cyclohexanol, cyclohexane	6.18
Cumene	6.19
Dimethyl terephthalate	6.21
Ethylene dichloride	6.22
Ethylene and polyethylene	6.23
Ethylene oxide	6.24
Ethylene glycols	6.25
Ethylbenzene/styrene	6.26
Ethyl acetate	6.27
Epichlorohydrin	6.28
Fluorocarbons	6.29
Formaldehyde	6.31
Glycol ethers	6.32
Hydrochloric acid	6.33
Hydrofluoric acid	6.34
(continued)	6.35

SOURCE TYPE	CODE
Maleic anhydride	6.36
Methanol	6.37
Methyl ethyl ketone	6.38
Nitric acid	6.39
Nitrobenzene	6.41
Paint and varnish	6.42
Pharmaceutical	6.43
Phosphoric acid	6.44
Phthalic anhydride	6.45
Proylene oxide	6.46
Phenol/acetone	6.47
Soap and detergents	6.48
Sodium carbonate	6.49
Sulfuric acid	6.51
Sulfur recovery	6.52
Synfuels and fuel conversion other than oil shale	6.53
Synthetic fibers	6.54
Synthetic rubber/rubber tires	6.55
Toluene diisocyanate	6.56
Trichloroethane	6.57
Terpthalic acid	6.58
Vinyl chloride and polyvinyl chloride	6.59
Alcohol fuel production	6.61
Other	6.62
7. Food and Agricultural	
Alfalfa dehydrating	7.0
Roasting	7.1
Feed and grain mills and elevators	7.2
Fermentation and alcoholic beverages	7.3
Fish processing	7.4
Fertilizer plants	7.5
Starch manufacturing	7.6
Sugar cane processing	7.7
Fats and vegetable oils	7.8
Fruit and vegetable processing	7.9
Other	7.11
	7.12
8. Metallurgical	
Primary aluminum production	8.0
Coke production	8.1
Primary copper smelting	8.2
Ferroalloy production	8.3
Iron and steel production	8.4
Primary lead smelting	8.5
Zinc smelting	8.6
Secondary aluminum	8.7
Secondary copper smelting and alloying	8.8
Gray iron foundaries	8.9
	8.11

(continued)

SOURCE TYPE	CODE
Secondary lead smelting	8.12
Secondary magnesium smelting	8.13
Steel foundaries	8.14
Secondary zinc processing	8.15
Storage battery production/reclamation	8.16
Lead oxide and pigment production	8.17
Miscellaneous lead products	8.18
Ore crushing and grinding	8.19
Sintering	8.21
Other	8.22
9. Mineral Products Industry	
Asphalt batching plants	9.0
Bricks, ceramic, and related clay products	9.1
Refractories	9.2
Portland cement manufacturing	9.3
Cement manufacturing - other than portland	9.4
Coal cleaning	9.5
Coal cleaning (thermal dryer)	9.6
Glass fiber manufacturing	9.7
Frit manufacturing	9.8
Glass manufacturing	9.9
Gypsum manufacturing	9.11
Lime manufacturing	9.12
Mineral wool manufacturing	9.13
Perlite manufacturing	9.14
Phosphate rock processing	9.15
Stone quarrying, sand and gravel processing	9.16
Taconite ore processing	9.17
Mining operations	9.18
Other	9.19
	9.21
10. Wood Products	
Kraft pulp mills	10.0
Wood pulping other than kraft	10.1
Hardboard	10.2
Plywood plants	10.3
Woodworking	10.4
Other	10.5
	10.6
11. General Manufacturing and Fabrication	11.0
12. Institutional/Commercial	12.0

APPENDIX B

ABBREVIATIONS FOR PROCESS, CAPACITY, AND EMISSION UNITS

ABBREVIATIONS FOR PROCESS AND EMISSION UNITS

ADD	additive
AL	aluminum
AM	American
ASSOC	association
ATMOS	atmospheric
CALC	catalytic
CO	company
COLL	collection
COOP	cooperative
CORP	corporation
DECARB	decarbonization
DESULF	desulfurization
DISTIL	distillation
DISTN	distribution
DIV	division
E	eastern
EA	each
ELECT	electric
FAC	facility
FCC	fluid catalytic cracking
FCCU	fluid catalytic cracking unit
FURN	furnace
GEN	generator
HAND	handling
I.C.	internal combustion
INCIN	incinerator
INDEPEN	independent
INTERNAT	international
LAB	laboratory
LDOUT	loadout
LIQ	liquid
LT	light
MATL	material
MFG	manufacturing
MISC	miscellaneous
MODIF	modification
NAT	natural
NATL	national
PREP	preparation
PROD	production
PWR	power
REC	recovery
RECIP	reciprocating

RECLAM	reclamation
REFIG	refrigeration
REFIN	refinery
REG	regular
REGEN	regenerator
RESID	residual
ROT	rotary
SCRUB	scrubber
SECOND	secondary
SHIP	shipping
STOR	storage
SUP	supplementary
SYS	system
TRANS	transmission
UNIV	university
VAC	vacuum
VERT	vertical

ACF	actual cubic feet
ACFM	actual cubic feet per minute
ADP	air-dried pulp
AV	average
BBL	barrels
BLS	black liquor solids
BPSD	barrels per stream day
BTU	British thermal units
CF	cubic feet
CFM	cubic feet per minute
CU YD	cubic yard
D	day
D FEED	dry feed
DACF	dry actual cubic feet
DIST	distillate
DSCF	dry standard cubic feet
F	feet
G	gram
G/HP-H	grams per horsepower - hour
G/O	gas/oil
GAL/M	gallons per minute
GR	grains
H	hour
HP	horsepower
J	joule
KG	kilogram
KW	kilowatt
LB	pound
LT	long ton
M	thousand (10^3)
MM	million (10^6)
MG/L	milligram per liter
MW	megawatt

N	natural
NG	nanogram
PPM	parts per million
PPH	parts per hundred
RDF	refuse-derived fuel
RESID	residual
S	sulfur
SB	subbituminous
SCF	standard cubic feet
SCFD	standard cubic feet per day
SCFM	standard cubic feet per minute
SEC	second
SQF	square feet
T	ton
VOL	volume
WKS	weeks
YR	year

APPENDIX C

EDP SERVICES REGISTRATION FORM

EDP SERVICES REGISTRATION

(Please Print or Type)

MIDSD USE ONLY

DATE RECEIVED

SERVICE (Check one)
- ☐ TIME SHARING
- ☐ TECHNICAL ASSISTANCE
- ☐ OTHER

SUPPLIER (Specify)

SOURCE OF FUNDS
- ☐ U.S. EPA
- ☐ REIMBURSIBLE
- ☐ SPONSORED

PROJECT CODE

ENVIRONMENTAL SYSTEM IDENTIFICATION NUMBER

PROJECT TITLE (Limit: 60 characters, including spaces)

PROJECT DESCRIPTION

ORGANIZATION

ORGANIZATION CODE

ZBB DECISION UNIT TITLE

ZBB DECISION UNIT CODE

DOLLAR AMOUNT	DATE TO BEGIN	DURATION	SYSTEM	☐ RETRIEVAL ONLY ☐ FULL ACCESS	DAILY STORAGE

PROJECT MANAGER	NAME (Last, First, M.I.)	PHONE (Include area code)	DISTANCE CODE	REFERENCE INITIALS	LOGON

MAIL CODE (or room) | OFFICE OR LOCATION

ADDRESS (Street or P.O. Box) | CITY | STATE | ZIP CODE

MAILING LIST CODE
M ☐ S ☐
P ☐ T ☐
C ☐ U ☐
F ☐ N ☐

USER	NAME (Last, First, M.I.)	PHONE (Include area code)	DISTANCE CODE	REFERENCE INITIALS	LOGON

MAIL CODE (or room) | OFFICE OR LOCATION

ADDRESS (Street or P.O. Box) | CITY | STATE | ZIP CODE

MAILING LIST CODE
M ☐ S ☐
P ☐ T ☐
C ☐ U ☐
F ☐ N ☐

USER	NAME (Last, First, M.I.)	PHONE (Include area Code)	DISTANCE CODE	REFERENCE INITIALS	LOGON

MAIL CODE (or room) | OFFICE OR LOCATION

ADDRESS (Street or P.O. Box) | CITY | STATE | ZIP CODE

MAILING LIST CODE
M ☐ S ☐
P ☐ T ☐
C ☐ U ☐
F ☐ N ☐

TO:

U.S. Environmental Protection Agency
MIDSD TSSMS Office
National Computer Center
MD-34C *(Rm. 123 Michaux Building)*
Research Triangle Park, NC 27711

ORIGINATED BY | DATE

CONCURRENCE (Funding) | DATE

CONCURRENCE (Other) | DATE

MAILING LIST KEY

M — MANAGEMENT PANEL
P — PROPERTY
C — CONTRACTOR
F — FEDERAL NON-EPA
S — STATE OR LOCAL GOVT
T — TERMINAL CONTACT
U — UNIVERSITY
N — SYSTEM NEWS

MIDSD USE ONLY

POSTED	UPDATED	PROOFED

EPA Form 2800-3 (Rev. 9-79) PREVIOUS EDITION IS OBSOLETE

(continued on back)

APPENDIX D

TYMNET TERMINAL CODES

APPENDIX D

TYMNET TERMINAL IDENTIFIERS (CODES)

TYMNET's terminal identifiers are single characters that identify terminal speeds, carriage-return delay times, and codes to TYMNET. If you are in doubt as to which TYMNET terminal identifier to use, contact NCC Communications Control at 919-541-4506 (FTS 629-4506).

Identifiers by Terminal Characteristics

Identifier	Code	Speed	Terminal type
A	ASCII	30cps, 120 cps	CRT terminals
B	ASCII	15cps	All terminals
C	ASCII	30 cps	Impact printers
D	ASCII	10 cps	All terminals
E	ASCII	30 cps	Thermal printers
F	ASCII	15 cps in. 30 cps out	BETA terminals
G	ASCII	30cps, 120 cps	Belt printers G.E. Terminet
I	ASCII	120cps	Matrix printers
P)	EBCF/ Corre- spondence	14.8cps	Selectric-type terminals (e.g., 2741)

Notes:

1. The identifier A is used both for terminals with no line-feed or carriage-return delay, such as a CRT terminal and for terminals with buffers, such as the Tymshare 325.

2. The symbol) represents a carriage return.

IDENTIFIERS BY TERMINAL MAKE AND MODEL

Terminal	Identifier
ADDS	
560, 620, 680, 880, 980	A
Anderson Jacobson	
330	J
830, 832	A
630	E
860 ‡	A
Ann Arbor Terminals	
Design III. 200	A
Beehive Medical Electronics	
Mini Bee 1.2.4	A
Super Bee 2.3	A
I-211, M-501, R-211	A
Bell System	
Dataspeed 40/2	
KD	A
KDP	G
Computer Devices	
1030	E
1132, 1201, 1202, 1203 1204, 1205, 1206	A
Computek	
200, 300	A
Conrac	
401, 480	A
Control Data	
713	A
Computer Transceiver Systems	
Execuport	E
DEC	
GT40, LA34, LA36, LA38 LA120, ‡ LS120, ‡ VT05 VT50, VT100, VT132	
Datamedia	
1500, 2000, 2100, 2500	A
Datapoint	
1100, 3000, 3300	A
Delta Data	
5000, 5100, 5200	A
Digi-Log	
33, 209, 300	A
General Electric Terminet	
300, 1200	G
Gen-Com	
300	A
Hazeltine	
1200, 2000	A

(continued)

Terminal	Identifier
Hewlett-Packard	
2615, 2616, 262X Series 263X Series, 264X Series, 7220A	
Hydra	A
Model B	
IBM	I
2741	
Interdata	P
Carousel 300	
Incoterm	E
SPD 10/20, 20/20, 900	
Infoton	A
Vistar	
ITT	A
3501 Asciscope	
Lear Siegler	A
7700, ADM-1, ADM-2 ADM-3, ADM-31	
LogAbax Informatique	A
LX180	
LX1010‡	I
MI^2	A
2400	
Megadata	I
Memorex	A
1240	
NCR	G
260	
796	E
Omron	A
8525	
Ontel	A
4000	
Perkin-Elmer	A
1200, 1250	
Research	A
Teleray 3300, 3311, 3712	
Raytheon	A
PTS-100	
Singer	A
30	
Scientific Measurement Systems	E
1440	
Tally	A
1612‡	
Tec	A
400 Series, 1440	
Tektronix	A
4012, 4013, 4014, 4023, 4025	
(continued)	A

Terminal	Identifier
Teletype	
33, 35	D
38	B
43	A
Texas Instruments	
743, 745, 763, 765, 771, 820 ‡	A
720, 725, 733, 735	E
Texas Scientific	
Entelkon 10	A
Typagraph	
DP-30	C
Tymshare	
100, 110, 212, 213	E
200	D
310, 311	C
125, 126, 225, 315, 316, 325, 350, ‡420, 425, ‡430, 440W, 444, ‡470, ‡550, ‡1100‡	A
Wang Laboratories	
220 OB	A
Westinghouse	
1600, 1620	A
Xerox	
BC100, BC200	A

Notes:

1. The symbol) represents a carriage return.
2. ‡ During log in, enter Control R immediately before typing your user name.

APPENDIX E

TYMNET ACCESS TELEPHONE NUMBERS

APPENDIX E

TYMNET ACCESS NUMBERS

The following list of TYMNET telephone numbers are used to access Sperry Univac computers in Research Triangle Park, N. C. A user should locate his city on the list and dial the appropriate number. Users who fail to find their city on the list should call NCC Communication Control (919-541-4506 or FTS 629-4506) to find out if local dial is available. Users who have trouble locating an access phone or who experience busy signals, ring-no-answer, line drops, and other access problems should also call NCC Communication Control.

States and Access Numbers

Alabama

Birmingham	205/942-4141
	205/942-1015 (1200 212)
Huntsville	205/539-3753 (VADIC *)
Mobile	205/432-3382 (1200 212)
Montgomery	205/834-3410

Arizona

Phoenix	602/254-5811 (VADIC *)
Tuscon	602/747-4097 (1200 212)
	602/790-0764

Arkansas

Ft. Smith	501/782-3210 (1200 212)
Jonesboro	501/932-6886 (1200 212)
Little Rock	501/376-3768 (1200 212)
	501/372-5780
Springdale	501/756-2201 (1200 212)

California

Alhambra	213/572-0999
Antioch	415/757-6855
Arcadia	213/574-7636
Burlingame	415/348-4992
El Segundo	213/640-1281 (1200 212)
	213/640-1570
Fresno	209/432-1500 (VADIC *)
Hayward	415/785-3431
Long Beach	213/435-7088 (1200 212)
Los Angeles	213/626-0365 (1200 212)
	213/626-2400 (1200 212)
	213/623-8500 (1200 VADIC)

Marina Del Rey	213/821-2257
Mission Hills	213/365-2013
Modesto	209/578-4236
Mountain View	415/961-7971
	415/941-8450
Newport Beach	415/949-0330 (1200 212)
	714/540-0951 (1200 212)
Northridge	714/540-9560
Norwalk	213/998-4872 (1200 212)
Oakland	213/865-2066 (1200 212)
	415/836-8900 (1200 212)
Palo Alto	415/836-8700
Pasadena	415/856-9080
Pleasant Hill	213/577-8722 (1200 212)
Riverside/Colton	415/798-2093
	714/825-9372
Sacramento	714/824-8170 (1200 212)
	916/448-8151 (1200 212)
Salinas	916/441-6550
San Clemente	408/443-4333
San Diego	714/498-3130
	714/291-8700
San Franscisco	714/293-3590 (1200 212)
	415/986-8200
	415/397-4300 (1200 VADIC)
San Jose/Cupertino	415/788-7955 (1200 212)
	408/446-7001 (1200 VADIC)
	408/446-7309 (1200 212)
San Pedro	408/446-1470
Santa Barbara	213/830-0775
Santa Cruz	805/682-9641 (VADIC *)
Santa Rosa	408/429-9572 (1200 212)
	707/546-6776 (1200 212)
Van Nuys	707/546-1050
Ventura/Oxnard	213/986-9503
	805/486-4536 (1200 212)
Vista	805/487-0482
West Covina	714/727-6011
	213/331-3954

Colorado

Colorado Springs	303/633-9599 (1200 212)
Denver	303/475-2121
	303/830-9116 (1200 VADIC)
	303/830-9083 (1200 212)
	303/830-9003
	303/830-9043

Connecticut

Bridgeport/Fairfield	203/333-4926 (1200 212)
	203/579-7820

Danbury	203/743-1340
Darien	203/743-1650 (1200 212)
	203/655-7951 (1200 212)
Hartford/Bloomfield	203/655-8931
	203/242-7140
New Haven	203/242-7417 (1200 212)
	203/787-1702 (1200 212)
Waterbury	203/789-0579
	203/755-1153

District of Columbia

Washington	703/841-9330 (1200 VADIC)
	703/841-0200
	703/841-9560
	703/734-8370 (1200 212)
	703/734-3900
	703/442-3900 (300)
	703/442-3960 (VADIC *)
	703/442-7800 (1200 212)
	703/841-3550 (1200 212)

Delaware

Wilmington	302/658/5261
	302/658-8611 (1200 212)

Florida

Daytona Beach	904/252-4481
Ft. Lauderdale	305/467-7550
	305/467-3807 (1200 212)
Jacksonville	904/721-8100
Miami	305/374-7120
	305/358-7271 (1200 212)
Orlando	305/859-7670 (1200 212)
	305/851-3530
Pensacola	904/434-0134
Sarasota	813/365-3526 (1200 212)
St. Petersburg	813/535-6441
	813/535-1446 (1200 212)
Tampa	813/977-2400 (1200 212)
W. Palm Beach	305/622-2871

Georgia

Atlanta	404/659-6670
	404/581-0619 (1200 212)
	404/659-2910
Savannah	912/352-7259
	912/236-1904 (VADIC *)

Idaho

Boise	208/344-4311 (1200 212)
	208/343-4851

Illinois

Chicago	312/368-4700
	312/641-1630 (1200 212)
	312/372-0391 (1200 VADIC)
	312/368-4607
	312/346-4961
Freeport	815/233-5585
Joliet	815/723-9854 (1200 212)
Peoria	309/673-2156
Rockford	815/398-6090
Springfield	217/753-7900 (1200 212)
	217/753-7905

Indiana

Evansville	812/423-6885
Ft. Wayne	219/424-5162
Highland	219/836-5452
Indianapolis	317/926-1253 (1200 212)
	317/257-3461
Marion	317/662-0091
Merrillville	219/769-7254
South Bend	219/233-4163

Iowa

Cedar Rapids	319/363-9019 (1200 212)
	319/363-2482
Davenport	319/324-7197 (VADIC *)
Des Moines	515/288-6640
Iowa City	319/354-7371
	319/354-9532 (1200 212)
Waterloo	319/233-9227 (1200 212)

Kansas

Shawnee Mission	913/677-2833
	931/677-0707 (1200 212)
Topeka	913/233-0690
Wichita	316/265-1241
	316/264-7386 (1200 212)

Kentucky

Lexington	606/253-3463
	606/253-3498 (1200 212)
Louisville	502/361-3821 (1200 212)
	502/361-3881

Louisiana

Baton Rouge	504/292-4050
Lafayette	504/292-2650 (1200 212)
New Orleans	318/235-3501
	504/586-1071
Shreveport	504/524-4371 (1200 212)
	318/688-4666 (1200 212)

Maine

Portland	207/773-2029 (1200 212)

Maryland

Baltimore	301/547-8100
Rockville	301/244-8959 (1200 212)
	301/770-1680

Massachusetts

Boston	617/482-1854 (1200 VADIC)
	617/482-5605
	617/482-4677
Springfield	617/432-3386 (1200 212)
	413/781-6830
Worcester	413/781-0145 (1200 212)
	617/755-5601 (1200 212)
	617/754-9451

Michigan

Ann Arbor	313/662-8282 (1200 212)
Detroit	313/665-2627
	313/963-3388
	313/963-8880 (1200 212)
Flint	313/963-2353 (1200 VADIC)
Grand Rapids	313/732-7303 (1200 212)
	616/456-9092 (1200 212)
Jackson	616/459-5069
Kalamazoo	517/787-9461
	616/385-3150
	616/349-6753 (1200 212)
Lansing	616/388-3534 (VADIC *)
Manistee	517/487-2040
Plymouth	616/723-8373
	313/459-8100 (1200 212)
Southfield	313/459-8900
St. Joseph	313/569-8350
Traverse City	616/429-2568
	616/946-0002

Minnesota

Mankato	507/625-1684 (1200 212)
Minneapolis	612/339-5200
	612/339-8086
Rochester	612/339-2415 (1200 212)
	507/282-3741 (1200 212)

Mississippi

Jackson	601/969-5141 (1200 212)
Pascagoula	601/944-0860
	601/769-6502
	601/769-6673 (1200 212)

Missouri

Bridgeton	314/731-2304
Columbia	314/875-1150
Jefferson City	314/634-3273 (1200 212)
Joplin	417/782-3037 (1200 212)
Kansas City	913/677-2833
	913/677-0707 (1200 212)
Springfield	417/831-0566 (1200 212)
St. Joseph	816/232-0624 (1200 212)
St. Louis	314/421-5110
	314/621-4660 (1200 212)

Montana

Butte	406/494-2998 (1200 212)

Nebraska

Lincoln	402/475-8659 (VADIC *)
Omaha	402/392-2970
	402/397-0414 (1200 212)

Nevada

Las Vegas	702/293-0300
Reno/Carson City	702/882-7810 (VADIC *)

New Hampshire

Manchester	603/669-0493
Nashua	603/882-0435 (VADIC *)

New Jersey

Englewood Cliffs	201/894-8250
Lyndhurst	201/460-0100
	201/460-0180 (1200 212)
Moorestown	609/235-3761

Morristown		
Newark/Union	201/267-3997	(1200 212)
	201/483-5937	
Piscataway	201/483-4878	(1200 212)
Princeton	201/981-1900	
	609/452-8970	
Wayne	609/452-8560	(1200 212)
	201/785-4480	
New Mexico		
Albuquerque	505/843-6301	(1200 212)
New York		
Albany	518/463-3111	
Buffalo	518/434-2633	(1200 212)
	716/845-6610	
Corning	716/847-0500	(1200 212)
	607/936-4151	(1200 212)
Elmira	607/962-5071	
Hempstead L.I.	607/737-9010	(1200 212)
Huntington L.I.	516/872-6500	(VADIC *)
New York	516/549-2780	
	212/685-4414	
	212/532-0437	
	212/683-0131	
	212/684-6363	(VADIC *)
Niagara Falls	212/785-5400	(VADIC *)
	716/285-3114	(1200 212)
Rochester	716/285-6691	
	716/248-8000	
Syracuse	716/248-8350	(1200 212)
	315/437-1117	(1200 212)
White Plains	315/437-7111	
	914/694-8960	(1200 212)
	914/694-9361	
North Carolina		
Asheville		
Charlotte	704/255-0021	(1200 212)
	704/376-2544	(1200 212)
Greensboro	704/376-2545	
	919/275-9455	(1200 212)
Winston-Salem	919/379-0034	
	919/725-1414	
	919/725-9252	(1200 212)
Ohio		
Akron		
Cincinnati	216/535-1861	
	513/791-5311	(1200 212)
	513/891-7211	
	513/793-8893	(VADIC *)

Cleveland	216/781-7050
Columbus	216/861-5383 (1200 212)
Dayton	614/421-1650 (1200 212)
Marysville	614/421-7270
Toledo	513/223-3847
Youngstown	513/461-6400 (1200 212)
	513/642-2015 (1200 212)
	419/255-2946 (1200 212)
	419/243-3144
	216/744-5326 (1200 212)

Oklahoma

Oklahoma City	405/947-0561
Tulsa	405/949-0125 (1200 212)
Tulsa	918/663-2220
	918/665-2750 (1200 212)

Oregon

Portland	503/231-4050
Portland	503/231-4077 (1200 212)

Pennsylvania

Allentown	215/433-6131
Altoona	215/432-5926 (1200 212)
Erie	814/946-8888 (1200 212)
Harrisburgh	814/453-7161
Philadelphia	717/236-1190
Pittsburgh	717/233-8531 (1200 212)
Valley Forge	215/567-1381 (1200 212)
York	215/561-6120
	412/261-4151 (1200 212)
	412/765-1320
	215/666-0930 (1200 212)
	215/666-9190
	717/846-3900 (VADIC *)

Rhode Island

Providence	401/273-0200
	401/273-0201 (1200 212)

South Carolina

Charleston	803/577-2179 (VADIC *)
Columbia	803/256-5238 (1200 212)
Greenville	803/252-0840
Spartanburg	803/271-2418
	803/271-9967
	803/585-2637 (VADIC *)

Tennessee

Chattanooga	615/756-0561 (1200 212)
Knoxville	615/756-5856
	615/637-3118
Memphis	615/523-7458 (1200 212)
	901/529-0183 (1200 212)
Nashville	901/529-0170
	615/361-7566 (1200 212)
	615/367-9382

Texas

Austin	512/444-5800 (1200 212)
Baytown	512/444-3280
Beaumont	713/427-5856
Corpus Christi	713/832-2589
Dallas	512/882-3641
	214/638-8888
El Paso	214/688-1444 (1200 212)
	915/544-9590
Ft. Worth	915/532-1936 (1200 212)
	214/263-4581
Houston	214/263-0278 (1200 212)
	713/977-4080
	713/975-0500
	713/780-7496 (1200 VADIC)
	713/977-7671 (1200 212)
Longview	713/780-7390
Lubbock	214/758-1756
Midland	806/762-0136
	915/683-9833 (1200 212)
Odessa	915/683-5645
San Antonio	915/563-3745
	512/699-9627 (1200 212)
	512/696-4002

Utah

Salt Lake City	801/582-8972
	801/582-6060 (1200 212)

Vermont

Burlington	802/864-0054 (1200 212)

Virginia

Lynchburg	
Newport News	804/528-0021 (1200 212)
Norfolk	804/596-5754
Richmond	804/625-8301 (1200 212)
	804/788-4604 (1200 212)
Roanoke	804/649-3050
	703/345-6668 (VADIC *)

Washington

Enumclaw	206/825-6909
Olympia	206/943-4190
Richland	509/375-3367 (1200 212)
	509/375-1975
Seattle	206/625-9937 (1200 212)
	206/625-9900
Spokane	509/747-4105 (VADIC *)
Tacoma	206/952-6800

West Virginia

Charleston	304/345-2908 (1200 212)
Huntington	304/522-6261

Wisconsin

Appleton	414/734-9940
Eau Claire	715/834-7863
Green Bay	414/468-6808 (1200 212)
Madison	608/221-0891 (1200 212)
	608/221-4211
Milwaukee	414/257-3482
	414/257-1703 (1200 212)
Neenah	414/722-5580 (VADIC *)
Oshkosh	414/235-4594

WATS (800 Area Code) Number

Users are requested to use this number only when local dial service is not available.

(800) 572-1800

Local Access Numbers

Local users in the Research Triangle, North Carolina, area will bypass the TYMNET facilities with the following procedures:

300 bps:

1. Dial 549-9100.
2. Once carrier is established enter UNIVAC (uppercase, even parity) and press RETURN.
3. Answer message accordingly.

1200 bps:

1. Dial 549-9192.
2. Once carrier is established, enter UNIVAC (uppercase, even parity) and press RETURN.
3. Answer messages accordingly.

APPENDIX F

NCC USER REFERENCE MANUAL (URM) REQUEST FORM

URM REQUEST FORM

DATE _____

(CHECK APPROPRIATE BOX)

☐ FIRST REQUEST

☐ ADDITIONAL REQUEST

☐ NAME/ADDRESS CHANGE

☐ CANCEL FURTHER UPDATES

NAME _____ _____ _____
LAST FIRST MIDDLE INITIAL

DIVISION/REGION OR COMPANY _____

MAILING ADDRESS _____

MAIL DROP _____ OR BIN NUMBER _____

CITY/STATE _____ ZIP CODE _____

PHONE NO. _____

USER-ID _____

MAIL TO: NCC USER DOCUMENTATION (MD - 34B)
ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

PHONE NOS. FTS 629-3648
(919) 541-3648

APPENDIX G

ANNOTATED EXAMPLE OF A TERMINAL SESSION

APPENDIX G

ANNOTATED EXAMPLE OF A TERMINAL SESSION

The following is an example of a session at a terminal using the commands described in Section 3. Statements preceded by ">" were entered on a terminal screen by a user, whereas the computer issued the other statements and data to the screen. Statements in boxes suggest a user's thoughts that might motivate his/her actions. They are not part of the terminal session, but help explain why various actions were taken.

> "Let's see if BLIS works like EPA says it does. I will dial up the TYMNET system and enter my UNIVAC passwords when required."

(User dials local TYMNET number and connects to modem.)

Please type your terminal Identifier >A

PL(GARBLE) EASE SI(GARBLE)GN IN > UN1EPA1;NCC

UNIV ON LINE (May be garbled) > UNIVAC

XXXXXXXXXXXX ENTER USERID/PASSWORD

>USER/PASS (Supply your own.)

*DESTROY USERID/PASSWORD ENTRY
UNIVAC 1100 OPERATING SYSTEM LEV. 37R2C-80-09A(RSI)

> "Well, it looks I got into the UNIVAC system. Now I will enter a run card, and enter these UNIVAC commands in ECL."

>@RUN RUNID, ACCOUNT-NUM,PRMS/PRMSP
DATE: 110182 TIME: 170513
NEWS CURRENT AS OF 08:50:42 ON 10/27/82

>@ASG,T JP., F33,NCC054
READY

```
>@XQT      s2K*S2K.S2K
11/01/82   17:08:18   BEGIN SYSTEM 2000   RELEASE 2.90A
---
>USER, ANY:
---
>SHARED DATA BASE NAME IS BLIS:
-556-  OPENED.....BLIS                5          1  11/01/82  15:43:18
```

"Looks like I'm connected to the BLIS data base. I wonder how much data is in the system today."

```
---
>TALLY/ALL/ C1:
****************************************
ITEM-          ID NUMBER
****************************************
MINIMUM-       AK-0001
----------------------------------------
MAXIMUM-       WY-0001
----------------------------------------
     611 DISTINCT VALUES
----------------------------------------
     612 TOTAL OCCURRENCES
----------------------------------------
```

"This tally shows 612 data entries but only 611 ID numbers. One ID number must be entered twice. I wonder which states are entering data."

```
---
>TALLY/EACH/  C14:
****************************************
ITEM-          STATE INITIALS
****************************************
OCCURRENCES    VALUE
----------------------------------------
     4         AK
    16         AL
     7         AR
     5         AZ
    27         CA
    14         CD
     1         CT
     5         DE
    31         FL
```

9	GA
1	HI
9	IA
2	ID
16	IL
21	IN
3	KA
12	KS
13	KY
41	LA
4	MA
15	MD
26	MI
5	MN
5	MO
8	MS
2	MT
27	NC
3	NE
5	NJ
5	NM
6	NV
3	NY
33	OH
10	OK
1	OR
24	PA
13	SC
14	TN
96	TX
12	UT
15	VA
2	VI
5	WA
24	WI
10	WV
1	WY

46 DISTINCT VALUES

611 TOTAL OCCURRENCES

"This tally ran off my 20-line screen. I'll have to watch that. I see that Texas submitted the largest number of entries (96). There are only 46 values for state initials, so some states haven't entered any data."

"I wonder how much data is recent (less than 4 years old)."

```
---
>PR COUNT C1 WH C19 GT 01/01/79:
   CNT   1*   560
```

"Most entries are less than 4 years. But I'm interested in LAER; maybe there are fewer entries in this category."

```
---
>PR COUNT C1 WH C19 GT 01/01/79 AND C17 EQ LAER:
   CNT   1*   40
```

"That's better. But I want to get a group of less than 20 entries before I print anything on my screen."

```
---
>PR COUNT C1 WH C19 GT 01/01/80 AND C17 EQ LAER:
   CNT   1*   38
---
>PR COUNT C1 WH C19 GT 01/01/81 AND C17 EQ LAER:
   CNT   1*   16
```

"Now I'll print company names and ID numbers to see where these LAER entries come from."

```
---
>PR   C10,   C1 WH SAME:
     10*  DIVERSIFIED PRINTING
     1*  TN-0002
     10*  AMOCO OIL CO.
     1*  IN-0010
     10*  BEMIS CARPHANE FILMS
     1*  WI-0003
     10*  BEMIS SPECIALTY FILMS
     1*  WI-0004
     10*  BRIGGS & STRATTON CORP.
     1*  WI-0006
     10*  ROCK ISLAND LIQUID FUELS, INC.
     1*  IL-0009
     10*  CORN PRODUCTS
     1*  IL-0010
     10*  NATIONAL CAN CORP.
     1*  IL-0011
     10*  GRANITE CITY STEEL
     1*  IL-0014
```

```
10*  GRANITE CITY STEEL
1*  IL-0015
10*  AVERY INTERNAT
1*  OH-0014
10*  ITEN FIBRE CO.
1*  OH-0015
10*  GMC, CADILLAC MOTORS
1*  MI-0021
10*  HAMMOND LEAD PROD., HALSTAB DIV
1*  IN-0006
10*  COLUMBUS COATED FABRICS
1*  OH-0033
10*  MCKAY BAY REFUSE-TO-ENERGY PROJECT
1*  FL-0030
```

"I see that Illinois and Wisconsin submitted the most LAER data recently. But that printed list still ran off my screen. If I use LIST command I should get a better table."

```
---
>LIST C10, C1 WH SAME:

*     COMPANY NAME                                  ID NUMBER
***
*     DIVERSIFIED PRINTING                          TN-0002
*     AMOCO OIL CO.                                 IN-0010
*     BEMIS CARPHANE FILMS                          WI-0003
*     BEMIS SPECIALTY FILMS                         WI-0004
*     BRIGGS & STRATTON CORP.                       WI-0006
*     ROCK ISLAND LIQUID FUELS, INC.                IL-0009
*     CORN PRODUCTS                                 IL-0010
*     NATIONAL CAN CORP.                            IL-0011
*     GRANITE CITY STEEL                            IL-0014
*     GRANITE CITY STEEL                            IL-0015
*     AVERY INTERNAT                                OH-0014
*     ITEN FIBRE CO.                                OH-0015
*     GMC, CADILLAC MOTORS                          MI-0021
*     HAMMOND LEAD PROD., HALSTAB DIV               IN-0006
*     COLUMBUS COATED FABRICS                       OH-0033
*     MCKAY BAY REFUSE-TO-ENERGY PROJECT            FL-0030
---
```

"Now I'd like to see a range of emission limits for particulates, but first I need to find out what emission units people are using."

```
>PR C203 WH SAME AND C201 EQ PM:
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/H
     203* LB/T COKE
     203* GR/DSCF
     203* LB/T COKE
     203* GR/DSCF
     203* NO VIS. EMISS.
     203* NO VIS. EMISS.
     203* G/MCF
     203* G/MCF
     203* % OVERSPRAY CONTRL
     203* % OVERSPRAY CONTRL
     203* NO VIS. EMISS.
     203* G/MCF
     203* % OVERSPRAY CONTRL
     203* % OVERSPRAY CONTRL
     203* % OVERSPRAY CONTRL
     203* % OVERSPRAY CONTRL
     203* % OVERSPRAY CONTRL
     203* G/MCF
     203* G/MCF
     203* LB/H
     203* LB/H
     203* GR/DSCF AT 12% 02
```

"That list ran off my screen again, but I could see that LB/H was the most common unit. I want to see the range of values for LB/H."

```
---
>PR COUNT C202, MIN C202, AVG C202, MAX C202 WH C19 GT 01/01/81
---
AND C17 EQ LAER AND C201 EQ PM AND C203 EQ LB/H:
     CNT  202* 15
     MIN  202*      .0500
     AVG  202* 2.115
     MAX  202*     8.4000
```

"Some of these emissions look pretty low. I'd like to see the kinds of equipment and efficiencies they used. I have a case in my jurisdiction where we need to get under 6.5 LB/H. I'll list ID-number, too, to see which entry I'm looking at."

```
---
>LIST C1, C209 C207 WH SAME AND C202 LT 6.5:
 .....................C
 -808- UNRECOGNIZED COMPONENT LABEL -
```

Ooops. I forgot a comma after one of the data components.

```
---
>LIST C1, C209, C207, WH SAME AND C202 LT 6.5:
 .......................C
 -100- SYNTAX ERROR -
```

"Now I have too many commas."

```
---
>LIST C1, C209, C207 WSAME AND C202 LT 6.5:
 ..........................................C
 -808- UNRECOGNIZED COMPONENT LABEL -
```

"I do not believe I entered WSAME."

```
---
>LIST C1, C209, C207 WH SAME AND 202 LT 6.5:
 ....................................C
 -808- UNRECOGNIZED COMPONENT LABEL -
```

"G!!#!!?" (Nonstandard computer terminology)

```
---
>LIST C1, C209, C207 WH SAME AND C202 LT 6.5
---
```

```
:
*  ID NUMBER    PERCENT EFFICIENCY    CONTROL EQUIPMENT
***
*  IL-0009
*  IL-0010                            BAGHOUSE
*  IL-0010                            WET SCRUBBER
*  IL-0010                            CYCLONES
*  IL-0010                            CYCLONES
*  IL-0010                            MULTICLONES
*  IL-0010                            SCRUBBER
*  IL-0010                            CYCLONE (2 STAGE) & SCRUBBER
*  IL-0010                            CYCLONES, HIGH EFF.
*  IL-0010                            CYCLONES, HIGH EFF.
*  IL-0010                            CYCLONES, 2 STAGE
*  IN-0006                            CYCLONES, HIGH EFF.
*  IN-0006                 99.800     BAGHOUSE
                           99.800     BAGHOUSE
```

"I see there was a case in Illinois that required a lot of equipment. I think I'll call up the contact person and get the whole scoop from him."

```
---
>PR C23, C24, C25  WH C1 EQ IL-0010:
   23*  ILLINOIS EPA
   24*  CHRIS ROMAINE
   25*  (217)-782-2113
```

"Thanks for the tip. See you later, BLIS."

```
---
>EXIT:
  -506- CLOSED.....BLIS
                                        5          1  11/01/82    15:43:18
  11/01/82  17:08:47    END    SYSTEM 2000    RELEASE 2.90A
```

APPENDIX H

EPA REGIONAL OFFICE BIN NUMBER ASSIGNMENTS

APPENDIX H

EPA REGIONAL OFFICE BIN NUMBER ASSIGNMENTS

Region	Bin	Address	Phone
1	81	EPA - Region 1 JFK Federal Building Room 1007 B Boston, Massachusetts 02203	617/223-5885
2	82	EPA - Region 2 26 Federal Plaza New York, New York 10007	212/264-9578 212/264-9850
3	83	EPA - Region 3 6th & Walnut Streets Philadelphia, Pennsylvania 19106	215/597-3530
4	84	EPA - Region 4 345 Courtland Street Atlanta, Georgia 30308	404/257-2864
5	85	EPA - Region 5 230 South Dearborn Avenue Chicago, Illinois 60604	312/353-2061 312/353-2303 312/353-2205
6	86	EPA - Region 6 1201 Elm Street First International Building Dallas, Texas 75270	214/729-2641
7	87	EPA - Region 7 324 East 11th Street Kansas City, Missouri 64106	816/758-4285
8	88	EPA - Region 8 1860 Lincoln Street Denver, Colorado 80203	303/327-2226
9	89	EPA - Region 9 215 Fremont Street San Franscisco, California 94111	415/556-2326
10	90	EPA - Region 10 1200 Sixth Avenue Seattle, Washington 98101	206/399-1580

APPENDIX I

EXAMPLES OF PRINTED TABLES USING LIST COMMAND

APPENDIX I

EXAMPLES OF PRINTED TABLES USING LIST COMMAND

In this appendix, examples of extended LIST commands are given, followed by a sample page from the resulting table.

```
@SYM,U       READ48,,1,RM95P6
@SYM,U       READ48,,1,PR3801
@XQT         S2K,S2K,S2K
 09/21/82  13:08:15  BEGIN SYSTEM 2000  RELEASE 2.90A
---
USER,ANY;
---
SHARED DATA BASE NAME IS BLIS;
 -55A- OPENED.....BLIS                 3    3563  07/29/82  14:55:10
---
ACCESS;
---
LIST/REPEAT SUPPRESS,
---
TITLE 0(32)BLIS BOILER LIST BY PROCESS CODE (FUEL) AND CAPACITY,
---
F(50)PROCESS CODES--  1,1=COAL  1,2=OIL  1,3=NG  1,4=WOOD  1,5=MULTI  1,6=OTHER,
---
L(5)PROC,CODE, R(13) BOILER,CAPACITY, L(15), L(35) , COMPANY NAME,
---
L(5) ,STATE, L(6) EPA,REGION, L(9)REFERENCE, NUMBER/
---
C101, C103, C104, C10, C14, C1A, C1, ORDERED BY C101, C103
---
WHERE C104 EQ MMBTU/H AND C1C1 SPANS 1,1,1,A;
```

BLIS BOILER LIST BY PROCESS CODE (FUEL) AND CAPACITY
09/21/1982

PROC CODE	BOILER CAPACITY		COMPANY NAME	STATE	EPA REGION	REFERENCE NUMBER
1.3	198.00	MMBTU/H	RIO BLANCO OIL SHALE-BI	CO	8	CO-0013
1.3	293.00	MMBTU/H	PPG INDUSTRIES	WV	3	WV-0003
1.3	303.00	MMBTU/H	BASF-WYANDOTTE	LA	6	LA-0014
1.4	22.30	MMBTU/H	CROWN WOOD PRODUCTS	NC	4	NC-0022
1.4	172.00	MMBTU/H	CAROLINA FOREST INDUSTRIES, INC.	SC	4	SC-0005
1.4	211.20	MMBTU/H	GEORGIA PACIFIC CORP.	AR	6	AR-0005
1.4	272.00	MMBTU/H	GEORGIA-PACIFIC CORP.	LA	6	LA-0041
1.4	350.00	MMBTU/H	WESTERN KRAFT	KY	4	KY-0001
1.4	500.00	MMBTU/H	ALABAMA KRAFT	AL	4	AL-0007
1.4	666.00	MMBTU/H	ST REGIS PAPER CO.	FL	4	FL-0004
1.4	892.00	MMBTU/H	PORT ST. JOE	FL	4	FL-0022
1.5	3.12	MMBTU/H	FERRO CHEMICAL DIV OF FERRO CORP.	OH	5	OH-0025
1.5	173.00	MMBTU/H	HCC CHEMICAL CO.	LA	6	LA-0018
1.5	237.00	MMBTU/H	PHILIP MORRIS	VA	3	VA-0003
1.5	240.00	MMBTU/H	E. I. DUPONT DE NEMOURS	TX	6	TX-0027
1.5	249.00	MMBTU/H	FLAMBEAU PAPER CORP.	WI	5	WI-0001
1.5	511.50	MMBTU/H	CONTAINER CORP.	AL	4	AL-0014
1.5	557.00	MMBTU/H	FORT HOWARD PAPER CO.	OK	6	OK-0009
1.5	587.00	MMBTU/H	GILMAN PAPER CO.	GA	4	GA-0009
1.5	609.00	MMBTU/H	STONE CONTAINER CORP.	OH	5	OH-0003
1.5	659.00	MMBTU/H	THE CHESAPEAKE CORP.	VA	3	VA-0001
1.5	760.00	MMBTU/H	INTERNATIONAL PAPER CO.	LA	6	LA-0017
1.5	769.00	MMBTU/H	AMES MUNICIPAL POWER PLANT	IA	7	IA-0006
1.5	980.00	MMBTU/H	SCOTT PAPER	AL	4	AL-0002
1.5	1021.00	MMBTU/H	CONTAINER CORP OF AMERICA	FL	4	FL-0026
1.5	1055.00	MMBTU/H	UNION CAMP CORP.	GA	4	GA-0008
1.5	1361.00	MMBTU/H	GULF STATES UTILITIES	LA	6	LA-0004
1.5	1390.00	MMBTU/H				
1.5	1706.00	MMBTU/H				
1.6	12.55	MMBTU/H	MITCHELL ENERGY	TX	6	TX-0050
1.6	80.00	MMBTU/H	FRIENDSWOOD REFIN.	TX	6	TX-0022
1.6	99.00	MMBTU/H	CENTRAL SOYA	OH	5	OH-0037
1.6	79.00	MMBTU/H	LONGVIEW REFIN.	TX	6	TX-0029
1.6	80.00	MMBTU/H	FORMOSA PLASTICS	TX	6	TX-0088
1.6	160.00	MMBTU/H	TENNECO	LA	6	LA-0022
1.6	173.00	MMBTU/H	CITIES SERVICE CO.	IA	6	LA-0038
1.6	230.00	MMBTU/H	HCC CHEMICAL CO.	LA	6	LA-0018
1.6	240.00	MMBTU/H	DIAMOND SHAMROCK CORP.	TX	6	TX-0038
1.6	255.00	MMBTU/H	PETRACO VALLEY OIL & REFINING CO.	TX	6	TX-0073
1.6	330.00	MMBTU/H	TEXAS EASTMAN CO.	TX	6	TX-0077
1.6	6507.00	MMBTU/H	CAJUN ELECT. POWER COOP., INC.	LA	6	LA-0006
1.6	7863.00	MMBTU/H	HOUSTON LIGHTING & POWER	TX	6	TX-0008

PROCESS CODES-- 1.1=COAL 1.2=OIL 1.3=NG 1.4=WOOD 1.5=MULTI 1.6=OTHER

```
---
LIST/REPEAT SUPPRESS, TITLE )(44)EMISSION LIMITS & CONTROLS FOR BOILERS,
---
F(50)------ DATA FROM BACT-LAER INFORMATION SYSTEM (BLIS) ------,
---
L(9)REFERENCE+ NUMBER, L(9) +POLLUTANT, R(13)EMISSION+LIMIT, L(12),
---
R(25) +CONTROL EQUIPMENT, L(25) +OR PROCESS MODIFICATION,
---
L(7) PCT +EFFIC, L(6) +BASIS/ C1, C201, C202, C203, C207, C208, C209, C206,
---
ORDERED BY C101, C103, C201 WHERE C104 EQ **BTU/H AND C101 SPANS 1.1*1.6:
```

EMISSION LIMITS & CONTROLS FOR BOILERS
09/21/1982

REFERENCE NUMBER	POLLUTANT	EMISSION LIMIT		CONTROL EQUIPMENT	OR PROCESS MODIFICATION	PCT EFFIC	BASIS
	SO2	1.6000	LB/MMBTU 3 H AV		LOW S COAL		
NJ-0004	CO		NONE				
	NOX		NONE				
	PM		NONE	PROCESS CYCLONES			
	SO2	.3000	LB/MMBTU	PROCESS MOD.			
IA-0003	NOX	.7000	LB/MMBTU		CALCIUM/SULFUR, 2/1 LOW EXCESS AIR, STAGED BU RN	93.000	SIP BACT
	PM	.0300	LB/MMBTU	FABRIC FILTER			
OH-0010	PM	.0600	LB/MMBTU	BAGHOUSE			NOTE
IA-0003	SO2	2.0000	LB/MMBTU			99.000	BACT
OH-0010	SO2	1.2000	LB/MMBTU		LOW SULFUR WESTERN COAL		BACT
MI-0019	NOX	.6000	LB/MMBTU		LOW SULFUR COAL CONTROL EXCESS & OVERFIRE AIR		BACT
	PM	.0600	LB/MMBTU	CYCLONE & BAGHOUSE			
	SO2	1.6000	LB/MMBTU 24 H AV		LOW S COAL, MAX 1%	99.500	
TX-0024	NOX	.7000	LB/MMBTU		LOW EXCESS AIR		BACT
	PM	.0370	LB/MMBTU	FABRIC FILTERS			BACT
	SO2	.6800	LB/MMBTU		LOW SULFUR COAL		BACT
AR-0002	NOX	.6000	LB/MMBTU		FLUE GAS OXYGEN MONITOR		BACT
	PM	.0600	LB/MMBTU	ELECTROSTATIC PRECIPITATO R		99.000	BACT
	SO2	1.6000	LB/MMBTU		LOW SULFUR COAL (1.0% S)		BACT
KY-0007	PM	.1000	LB/MMBTU	BAGHOUSE		99.900	BACT
	SO2	1.2000	LB/MMBTU		FLUIDIZED BED COMBUSTION	85.000	NSPS
NC-0023	CO	1.0000	LB/T COAL		BOILER DESIGN		BACT
	NOX	.0700	LB/MMBTU		BOILER DESIGN		NSPS
	PM	.1100	LB/MMBTU	ESP		98.600	BACT
	SO2	2.2700	LB/MMBTU		1.93% SULFUR COAL		BACT
OH-0023	CO	.1900	LB/MMBTU		COMBUSTION CONTROL		BACT
	NOX	.7000	LB/MMBTU		COMBUSTION CONTROL		BACT
	PM	.0600	LB/MMBTU	FABRIC FILTER		99.000	BACT
	SO2	1.2000	LB/MMBTU		FLUIDIZED BED COMBUSTION	90.000	LAER
MI-0022	CO				COMBUSTION CONTRL		LAER
	NOX	.6000	LB/MMBTU				LAER
	PM	.0300	LB/MMBTU	BAGHOUSE			LAER
	SO2	1.1000	LB/MMBTU				LAER
AL-0009	NOX	.7000	LB/MMBTU		LOW S COAL		BACT
	PM	.1000	LB/MMBTU	MULTICLONE & SCRUBBER	EQUIPMENT DESIGN & OPERAT ION		NSPS
	SO2	1.2000	LB/MMBTU	CAUSTIC SCRUBBER		99.000	NSPS
						73.000	NSPS

------ DATA FROM BACT-LAER INFORMATION SYSTEM (BLIS) ------

APPENDIX J

REPORT WRITER INSTRUCTIONS FOR PRODUCING STANDARD TABLES

```
!REQ          $2%+$2%.$2%
USER,ANY:
SHARED DBM IS BLIS:
COPPOSE:

FOR REPORT TABLE1,
PHYSICAL PAGE IS 132 BY 5?:
LOGICAL  PAGE IS 132 BY 51:
DECLARE DATE   TDATE  = (+FTODAY+):
SELECT RECORD IF C1 EXISTS:
ORDER BY C28, C29, C1?:

FOR PAGE,
PRINT   (109)"PAGE",  R(114,ZZ9)PAGE,
PRINT  (109)"REPORT DATE",     R(121,PM/DD/YYYY)TDATE:
IF PAGE EQ 1+ THEN SKIP 2 LINES, PRINT
  (21)"TABLE 1.  INDEX OF CONTROL TECHNOLOGY DETERMINATIONS." :
IF PAGE GT 1+ THEN SKIP 2 LINES, PRINT
  (21)"TABLE 1.  INDEX (CONTINUED)." :
SKIP 2 LINES, PRINT
(1)"
(46)"----------------------------------------------------------------------",
SKIP 0 LINES, PRINT
(1)"
(66)"----------------------------------------------------------------------",
PRINT  (54)"PERMIT",          (124)"TABLE 2",
PRINT  (1)"SOURCE TYPE/COMPANY NAME",                    (46)"STATE",
       (54)"ISSUED",          (69)"AGENCY",      (85)"NAME OF CONTACT",
       (105)"TELEPHONE",      (125)"INDEX",
PRINT
(1)"
(66)"----------------------------------------------------------------------":
AT END,
SKIP 1 LINES, PRINT  (1)" + INDICATES DATUM IS TRUNCATED FOR THIS TABLE.",
    (50)"SEE FULL LISTING IN APPENDIX.":

FOR C2,
SKIP 1 LINES,  PRINT (1)"SOURCE TYPE -- ",  L(16,X(50))C3,  SKIP 2 LINES:

FOR C?,
PRINT   L(5,X(40))C10,        L(47,XX)C14,
        R(?1,MM/DD/YY)C19,  L(65,X(19))C23,       L(85,X(19))C24,
        L(105,X(19))C2?,      L(12",X(5))C2  :
END REPORT:

GENERATE TABLE1:
```

```
@XQT            S2K*S2K.S2K
USER,ANY:
SHARED DBN IS BLIS:
COMPOSE:
FOR REPORT TABLE2,
PHYSICAL PAGE IS 132 BY 55:
LOGICAL  PAGE IS 132 BY 55:
DECLARE DATE    TDATE  = (*FTODAY*):
DECLARE INTEGER CNTC02 = CNT C102:
DECLARE INTEGER CNTC01 = CNT C201:
DECLARE INTEGER NLINES = CNT C201:
SELECT RECORD IF C1 EXISTS:
ORDER BY C2P, C29, C1F, C1, C102, C201:
FOR PAGE,
RESET NLINES,
PRINT  (110)"PAGE",  F(115,ZZ0)PAGE,
PRINT  (110)"REPORT DATE",          R(122,PR/DD/YYYY)TDATE,
PRINT (28)"TABLE 2.  CONTROL TECHNOLOGY DETERMINATIONS BY TYPE OF SOURCE.",
SKIP 2 LINES, PRINT
(1)"
(66)"-------------------------------------------------------------------",:
PRINT   (67)"NEW/",          (74)"PROCESS",
PRINT (1)"SOURCE TYPE/COMPANY NAME", (27)"STATE & PERMIT", (47)"SOURCE SIZE",
(67)"MOD", (74)"DESCRIPTION",  (101)"EMISSION LIMITATIONS & BASIS", PRINT
(1)"
(66)"-------------------------------------------------------------------",
AT END,
SKIP 1 LINES,
PRINT (2)" *  INDICATES DATUM IS TRUNCATED FOR THIS TABLE.",
      (52)"SEE COMPLETE LISTING IN APPENDIX.",
PRINT (1)"(P) INDICATES EPA REGION FILE NUMBER IN LIEU OF STATE/LOCAL PERMIT ",
      (68)"NUMBER.",
PRINT (5)"FOR EMISSION LIMITS ROUNDED TO 0.00 SEE APPENDIX.":
FOR C2,
IF NLINES GT 50* THEN SKIP TO NEW PAGE:
SKIP 2 LINES, PRINT (1)"SOURCE TYPE -- ", R(16,X(5))C2,  L(22,X(50))C3,
SKIP 2 LINES, COMPUTE NLINES, COMPUTE NLINES, COMPUTE NLINES:
AT END, PRINT
(1)"
(66)"-------------------------------------------------------------------",:
FOR C0,
IF NLINES GT 55* THEN SKIP TO NEW PAGE:
RESET CNTC02:
PRINT  L(1,X(25))C10,              L(27,XX)C14,       L(30,X(15))C20,
       R(45,ZZZZZZ.99)C4,          L(55,X(10))C5,     L(68,XX)C1P :
IF ALL OF (C2" FAILS, C21 EXISTS) THEN SKIP 0 LINES,
PRINT  (27)"(P)",   L(33,X(11))C21:
AT END, SKIP 2 LINES, COMPUTE NLINES:
FOR C100,
IF NLINES GT 56* THEN SKIP TO NEW PAGE,
PRINT L(1,X(25))C10,  (27)"(CONTINUED)",  RESET NLINES:
RESET CNTC01:
COMPUTE CNTC02:
IF CNTC02 EQ 1* THEN SKIP 0 LINES, PRINT L(71,X(29))C102:
IF CNTC02 GT 1* THEN SKIP 1 LINES, PRINT L(71,X(29))C102:
FOR C200,
IF NLINES GT 56* THEN SKIP TO NEW PAGE,
PRINT L(1,X(25))C10,  (27)"(CONTINUED)",  RESET NLINES:
COMPUTE CNTC01:
IF ALL OF (C202 EXISTS, CNTC01 LE 1*) THEN SKIP 0 LINES, PRINT
L(101,XXX)C201,  R(105,ZZZZZ.99)C202,   L(113,X(15))C203,  L(130,XX)C206,
COMPUTE NLINES:
IF ALL OF (C202 EXISTS, CNTC01 GT 1*) THEN SKIP 1 LINES, PRINT
L(101,XXX)C201,  R(105,ZZZZZ.99)C202,   L(113,X(15))C203,  L(130,XX)C206,
COMPUTE NLINES:
IF C204 EXISTS THEN PRINT
 R(105,ZZZZZ.99)C204,   L(113,X(15))C205,  L(130,XX)C206, COMPUTE NLINES:
END REPORT:

GENERATE TABLE2:
```

```
@XQT          52K+52K,52K
USER,PNY:
SHARED DBN IS BLIS:
COMPOSE:
FOR REPORT TABLE2A,
PHYSICAL PAGE IS 132 BY 59:
LOGICAL  PAGE IS 132 BY 59:
DECLARE DATE    TDATE  = (*FTODAY*):
DECLARE INTEGER CNT102 = CNT C102:
DECLARE INTEGER CNT2C1 = CNT C201:
DECLARE INTEGER NLINES = CNT C201:
SELECT RECORD IF ANY OF
(ALL OF (C2 GE 1.0*, C2 LE 1.9*), ALL OF (C101 GE 1.0*, C101 LE 1.9*)):
ORDER BY C1C1, C10, C 0, C21, C102, C201:
FOR PAGE,
RESET NLINES,
PRINT  (110)"PAGE",  P(115,ZZ9)PAGE,
PRINT  (110)"REPORT DATE",          P(122,PM/DD/YYYY)TDATE,
PRINT (28)"TABLE 2A.  CONTROL TECHNOLOGY DETERMINATIONS FOR SOURCES",
PRINT (24)"WITH INDUSTRIAL OR UTILITY BOILERS (EXTERNAL COMBUSTION SOURCES)",
SKIP 2 LINES, PRINT
(1)"
(66)"----------------------------------------------------------------------",:
PRINT   (67)"NEW/",          (74)"PROCESS",
PRINT (1)"SOURCE TYPE/COMPANY NAME", (27)"STATE & PERMIT", (47)"SOURCE SIZE",
(67)"MOD",  (74)"DESCRIPTION",  (101)"EMISSION LIMITATIONS & BASIS",  PRINT
(1)"
(66)"----------------------------------------------------------------------":
AT END,
SKIP 1 LINES,
PRINT (2)" *  INDICATES DATUM IS TRUNCATED FOR THIS TABLE.",
      (52)"SEE COMPLETE LISTING IN APPENDIX.",
PRINT (1)"(R) INDICATES EPA REGION FILE NUMBER IN LIEU OF STATE/LOCAL PERMIT ",
      (62)"NUMBER.",
PRINT (5)"FOR EMISSION LIMITS ROUNDED TO 0.00 SEE APPENDIX.":

FOR C101,
IF NLINES GT 50* THEN SKIP TO NEW PAGE:
SKIP 2 LINES, COMPUTE NLINES, COMPUTE NLINES, PRINT
(1)"PROCESS CODE -- ", L(17,X(5))C1C1,
SKIP 2 LINES, COMPUTE NLINES, COMPUTE NLINES:
AT END, PRINT
(1)"
(66)"----------------------------------------------------------------------":
FOR CC,
RESET CNT1C2:
IF NLINES GT 55* THEN SKIP TO NEW PAGE:
PRINT  (1)"SOURCE CODE -- ",      L(16,X(5))C2,      COMPUTE NLINES,
PRINT  L(1,X(25))C10,             L(27,XX)C14,       L(30,X(15))C20,
       R(45, ZZZZZZ.99)C4,        L(55,X(10))C5,     L(68,XX)C18 :
IF ALL OF (C2C FAILS, C21 EXISTS) THEN SKIP C LINES.
PRINT  (30)"(R)",  L(33,X(11))C21:
AT END, SKIP 2 LINES, COMPUTE NLINES:
FOR C100,
RESET CNT201:
IF NLINES GT 56* THEN SKIP TO NEW PAGE,
PRINT L(1,X(29))C10, (27)"(CONTINUED)",  RESET NLINES:
COMPUTE CNT102:
IF CNT102 EQ 1* THEN SKIP 0 LINES, PRINT L(71,X(29))C102:
IF CNT102 GT 1* THEN SKIP 1 LINES, PRINT L(71,X(29))C102:
FOR C200,
IF NLINES GT 56* THEN SKIP TO NEW PAGE,
PRINT L(1,X(25))C10, (27)"(CONTINUED)",  RESET NLINES:
COMPUTE CNT201:
IF ALL OF (C202 EXISTS, CNT201 LE 1*) THEN SKIP 0 LINES, PRINT
L(101,XXX)C201,  R(105,ZZZZZ.99)C202,  L(113,X(15))C203,  L(130,XX)C206,
COMPUTE NLINES:
IF ALL OF (C202 EXISTS, CNT201 GT 1*) THEN SKIP 1 LINES, PRINT
L(101,XXX)C201,  R(105,ZZZZZ.99)C202,  L(113,X(15))C203,  L(130,XX)C206,
COMPUTE NLINES:
IF C2C4 EXISTS THEN PRINT
R(105,ZZZZZ.99)C2C4,  L(113,X(15))C205,  L(130,XX)C206, COMPUTE NLINES:
END REPORT:

GENERATE TABLE2A;
```

```
$XQT                    RAP*PR.S X-CHR125
USER,ANY:
SHARED DBM IS BLIS:
COMPOSE:

FOR REPORT TABLE3, PHYSICAL PAGE IS 132 BY 55:
DECLARE DATE    TDATE   = (*FTODAY*):
DECLARE INTEGER  C1END = CNT C1:
DECLARE INTEGER PLINES = CNT C1:
DECLARE CHAR EXTERNAL C26LN1  = CHR125 WITH 1 USING C26:
DECLARE CHAR EXTERNAL C26LN2  = CHR125 WITH 2 USING C26:
DECLARE CHAR EXTERNAL C27LN1  = CHR125 WITH 1 USING C27:
DECLARE CHAR EXTERNAL C27LN2  = CHR125 WITH 2 USING C27:
SELECT RECORD IF C1 EQ IA-0001*:
ORDER BY C22, C29, C1:

FOR PAGE,
AT END,  IF C1END GT (* THEN SKIP 2 LINES,
PRINT  (1)"(*) INDICATES DATUM WAS TRUNCATED FOR THIS TABLE.", PRINT
 (1)"=============================================================",
(66)"=============================================================",
PRINT  (1)"ID NUMBER", L(11,X(7))C1,  (55)"PAGE", R(59,ZZ9)PAGE,
       (100)"SOURCE TYPE CODE",          R(124,X(7))C2 :

FOR C1,
RESET C1END,  RESET PLINES,
PRINT (1)"GARY RUST",     (55)"APPENDIX",      P(121,MM/DD/YYYY)TDATE,
PRINT (1)"U.S.E.P.A. (MD-65)",
PRINT (1)"RTP, NC 27711",
SKIP 3 LINES,
PRINT   (1)"SOURCE TYPE/SIZE---", L(29,X(50))C3,    R(88,ZZZZZZZ9.99)C4,
        L(101,X(20))C5,
PRINT (28)"-----------------------------------------",
(66)"-------------------------------------------------------------------",
SKIP 2 LINES,  PRINT  (1)"COMPANY NAME/SITE LOCATION",
 L(29,X(40))C10,       R(7*,X(29))C12,          (99)"-",
  L(101,XX)C14,         R(104,XXXXX)C15,
IF ANY OF (C11 EXISTS, C1* EXISTS) THEN
PRINT  L(29,X(5))C11,    R(94,X('0))C13:
IF ALL OF (C13 EXISTS, C14 NE LA*) THEN SKIP 1 LINES,
PRINT     (125)"COUNTY" :
IF ALL OF (C13 EXISTS, C14 EQ LA*) THEN SKIP 1 LINES,
PRINT     (125)"PARISH" :
PRINT (22)"----------------------------",
(66)"-------------------------------------------------------------------":
SKIP 2 LINES,
PRINT (1)"DETERMINATION IS",   R(18,XXXX)C17,
       (96)"DATE OF PERMIT ISSUANCE---",        R(123,MM/DD/YY)C19 :
IF C1P EQ N* THEN SKIP 0 LINES, PRINT (23)"FOR A NEW SOURCE.":
IF C1* EQ P* THEN SKIP 0 LINES, PRINT (23)"FOR A MODIFIED SOURCE.":
PRINT     (1)"PERMIT NO.",    L(12,X(20))C20,
       (96)"ESTIMATED DATE OF START-UP---",   R(127,YYYY)C22 :
IF ALL OF (C20 FAILS, C21 EXISTS) THEN SKIP 1 LINES,
PRINT (12)"(REGION FILE NO.)",  L(30,X(20))C21  :
PRINT  (1)"DETERMINATION MADE BY",  L(29,X(30))C23,
       L(60,X(29))C24,                          L(96,X(20))C25,
PRINT (30)"(AGENCY)",  (54)"(AGENCY CONTACT PERSON)",  (100)"(PHONE)",
SKIP 2 LINES, PRINT
 (1)"=============================================================",
(66)"=============================================================",
SKIP 2 LINES,
PRINT (1)"PROCESSES SUBJECT ",     (39)"THROUGHPUT",     (57)"POLLUTANT",
      (96)"CONTROL EQUIPMENT",
PRINT (1)"TO THIS PERMIT",         (40)"CAPACITY",       (58)"EMITTED",
      (70)"EMISSION LIMITS & BASIS",      (96)"OR PROCESS MODIFICATION",
      (126)"EFF.%",
PRINT
 (1)"-------------------------------------------------------------------",
(66)"-------------------------------------------------------------------":
```

```
AT END,
COMPUTE C1END;
SKIP 3 LINES,
PRINT (1)"NOTES ----------":
IF C26 EXISTS THEN     PRINT L(1,X(126))C26LN1,    PRINT L(1,X(126))C26LN2
    ELSE SKIP 0 LINES;
IF C27 EXISTS THEN     PRINT L(1,X(126))C27LN1,    PRINT L(1,X(126))C27LN2
    ELSE SKIP 0 LINES;
SKIP TO NEW PAGE;

FOR C100,
IF PLINES GT 51 THEN SKIP TO NEW PAGE, RESET PLINES;
IF C102 EXISTS THEN  SKIP 2 LINES, PRINT
 L(1,X(32))C102,              R(74,ZZZZZ9.99)C103,
 L(44,X(12))C104,             COMPUTE PLINES,  COMPUTE PLINES;

FOR C200,
IF C201 EXISTS THEN COMPUTE PLINES,  PRINT L(60,XXXX)C201,
    R(65,ZZZZZ4.9999)C202,    L(77,X(15))C203,    L(93,X(2))C206,
    L(96,X(28))C207,          R(125,Z9.99)C209;
IF ALL OF (C207 FAILS, C208 EXISTS)
THEN SKIP 3 LINES,  PRINT L(96,X(28))C208;
IF ALL OF (C207 EXISTS, C208 EXISTS)
THEN SKIP 1 LINE,  PRINT L(96,X(35))C208,  COMPUTE PLINES;
IF C204 EXISTS THEN PRINT
  R(65,ZZZZZ9.9999)C204,   L(77,X(15))C205,  COMPUTE PLINES;

END REPORT;

GENERATE TAPLE1;
```

APPENDIX K

REFERENCES FOR FURTHER ASSISTANCE

APPENDIX K

REFERENCES FOR FURTHER ASSISTANCE

1. For assistance concerning the BACT/LAER Clearinghouse and its policies and procedures, contact:

   Gary Rust
   BACT/LAER Clearinghouse
   Emission Standards & Engineering Div. (MD-13)
   U.S. Environmental Protection Agency
   Research Triangle Park, NC 27711
   Phone (919) 541-5571 or (FTS) 629-5571

2. For assistance concerning the BACT/LAER Information System (BLIS) and its applications, contact:

   Roy Paul
   PEDCo Environmental, Inc.
   505 South Duke Street
   Durham, NC 27701
   Phone (919)688-6338

3. For assistance concerning the operation of UNIVAC, NCC reference manuals, System 2000 software, or user training, contact:

   User Services
   EPA National Computer Center
   Research Triangle Park, NC 27711
   Phone (919)541-3649 or (FTS)629-3649

4. For assistance concerning technical problems in establishing communications with UNIVAC, contact:

   NCC Communications
   EPA National Computer Center
   Research Triangle Park, NC 27711
   Phone (919)541-2

5. For assistance in obtaining technical documentation for System 2000 software, contact:

Lynda Knowlton
Intel Systems Corporation
P. O. Box 9968
Austin, TX 78766
Phone (800)531-5022

6. For assistance in obtaining technical documentation for UNIVAC software, contact:

Richard Kahl
Federal Systems Marketing
Sperry UNIVAC
8008 W. Park Drive
McLean, VA 22102
Phone (703)556-5519

APPENDIX L

BLANK FORMS FOR BACT/LAER DETERMINATION REPORT

Mail To: Gary Rust
BACT/LAER Clearinghouse
U.S. EPA (MD-15)
RTP, NC 27711

Source Category

Date of This Report

BACT/LAER DETERMINATION REPORT

Source Type/Size: _____

Company Name/Site Location: _____

Determination is: (circle appropriate definition)

BACT/LAER For New/Modified Source:

Permit No.: _____

Date of Permit Issuance: _____

Date of Estimated Start-up: _____

Determination Made By: _____ (Agency) _____ (Person Directly Knowledgable About Permit) _____ (Phone)

Permit Parameters: (List all processes subject to this permit)	Throughput capacity, weight rate, Btu input, etc.	Pollutant(s) emitted (SO_2 particulate, etc.)	BACT/LAER emission limit(s) and basis for the limits* (units of emissions/ units of input	Control equipment or process modification description**	Eff.%

Notes***: _____

*Indicate basis of emissions limit, i.e., BACT determined simply by technology and economics, NSPS, LAER, or determined by NAAQS or PSD increment constraints. (Example: 0.05 pounds particulate per million Btu input limit needed to protect Class I increment.) To promote consistency, please use NSPS emission limits where possible.

**To the extent possible in the space available, describe basic control or process equipment design details. Indicate unique or innovative features.

***Notes are optional and can address special items, unusual circumstances, or other clarifying information such as SIC codes.

11/82

```
 2*  SOURCE TYPE CODE
 3*  SOURCE TYPE NAME
 4*  SOURCE SIZE
 5*  SOURCE SIZE UNITS
10*  COMPANY NAME
11*  ADDRESS
12*  CITY
13*  COUNTY
14*  STATE INITIALS
15*  ZIP CODE
16*  EPA REGION
17*  BACT/LAER DETERM
18*  NEW/MODIFIED
19*  DATE PERMIT ISSUED
20*  PERMIT NUMBER
21*  REGION FILE NUMBER
22*  ESTIMATED STARTUP DATE
23*  AGENCY NAME
24*  AGENCY CONTACT PERSON
25*  AGENCY PHONE NUMBER
26*  NOTES

                                (REPEAT PROCESS RECORDS AS NEEDED)

100*
101*  PROCESS TYPE CODE
102*  NAME OF PROCESS
103*  THROUGHPUT CAPACITY
104*  THROUGHPUT UNITS

                                (REPEAT POLLUTANT RECORDS AS NEEDED)

200*
201*  POLLUTANT NAME
202*  EMISSION LIMIT
203*  EMISSION UNITS
204*  ALTERNATE LIMIT
205*  ALTERNATE UNITS
206*  BASIS FOR LIMITS
207*  CONTROL EQUIPMENT
208*  PROCESS MODIFICATION
209*  PERCENT EFFICIENCY

200*
201*  POLLUTANT NAME
202*  EMISSION LIMIT
203*  EMISSION UNITS
204*  ALTERNATE LIMIT
205*  ALTERNATE UNITS
206*  BASIS FOR LIMITS
207*  CONTROL EQUIPMENT
208*  PROCESS MODIFICATION
209*  PERCENT EFFICIENCY
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